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*Mass.: Commissioners on inland
fisheries and game
Reports 1866-83.*
HOUSE No. 3.

Commonwealth of Massachusetts.

REPORT

OF THE

COMMISSIONERS OF FISHERIES.

To His Excellency the Governor and Honorable Council.

The Commissioners of Fisheries, appointed under chapter 238 of the Acts of 1866, beg leave respectfully to report their doings since the date of their appointment.

Plans were first drawn for fish-ways over the dams at Lowell and at Lawrence; and these plans have received the official approval of Messrs. H. A. Bellows and W. A. Sanborn, Commissioners for New Hampshire, (section 3 of the Act,) and copies have been furnished respectively to the Proprietors of Locks and Canals at Lowell, and to the Essex Company at Lawrence; and other copies have been filed in the office of the Secretary of the Commonwealth, with an affidavit, as provided by section 4 of the Act.

The fish-way at Lowell, now very nearly finished, has been constructed and will be maintained entirely at the expense of the company. It is of the kind known as the *double stair*,

that is to say, two parallel lines of tanks, joined side by side, each one lower than the one above it, whereby the water passes through each in succession and reaches the foot of the fall by making a series of right angles. [See plate.] These tanks are over twelve feet square and are strongly built of masonry and heavy timber; and it is hoped that they will resist the ice and the freshets. The fall from each tank to the one below is one foot; and there are nine tanks, making a total fall of ten feet, including one foot from the dam into the first tank. At the foot of the stair a pool, twenty feet in diameter and three feet deep, connects immediately with the main channel of the river. This fish-way is intended more particularly for times of low water, though there is no reason why it should not work well in high water; when, however, the fish can rush up the outer slope of the dam, near the place where it makes an angle not far from the Dracut shore; and it is the intention of the Commissioners (under authority of section 12 of the Act,) to keep free from flashboards, if need be, a place ten feet wide at this spot, during very high water.

The pass adopted for the Lawrence dam is pretty much that of which a drawing is given in a former report,* except that instead of the flood-gate and *head* for regulating the water, a drawbridge has been substituted. This drawbridge is a trough, connecting the crest of the dam with the upper end of the pass. The sides of this trough are of a certain height and it conveys, therefore, a sheet of water of that height into the pass, and no more. In winter it is hoisted and the danger from ice is thus much diminished. The pass itself is an inclined trough, twelve feet wide, with a fall of one in ten. Cross-bulkheads, inclining up-stream,† are inserted at intervals to check and turn the current; and there are moreover, resting-tanks, where the fish may pause in their ascent. This structure is built in the most massive manner, with great timbers and heavy plank, bolted together. The lower part is blasted out of the ledge. This strength is necessary because of the almost resistless force of the ice brought down by the spring freshets. The estimated cost of this pass, which will be done before

* Senate Doc. No. 8, 1866.

† On the principle of Mr. N. W. Foster, of East Machias, Me.

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winter, is \$8,500. The Essex Company, in commutation of the useless fish-way it was obliged by law to maintain, has agreed to pay \$3,500 toward the first cost of this new fish-way, and to pay one-half the expense of maintaining the same for the term of five years from the passage of the Act. The remainder of the cost of construction and maintenance is to be paid by the Commonwealth.

Availing themselves of the discretion allowed by the 13th section of the Act, the Commissioners have not yet begun fish-ways over the dams on the Connecticut. At its last session, the general assembly of Connecticut authorized the governor to appoint two commissioners "to consider the subject of the protection of sea-fish in the Connecticut river;" and Messrs. J. H. Trumbull and W. H. Goodspeed have been appointed, under this Resolution. Doubtless, by their recommendation, the State of Connecticut will give such guarantees of assistance as will warrant Massachusetts in putting up fish-ways at Holyoke and at Turner's Falls. At the latter place a new dam is now building, but the proprietors have been duly notified that they will probably be soon required to make a suitable fish-way, which would, of course, be at their own expense. The precise rights of the Hadley Falls Company (at Holyoke,) have not yet been brought to arbitration, but there can be little doubt that the Commonwealth would have to bear a part of any expenses there incurred. If the State had to bear *all* the expense, it would be considerable; because, not only must the fish-way be paid for, but perhaps damages also, to the company for their water, and to the abutters for their land. The cost of this fish-way could scarcely be less than of the one at Lawrence, which will be not far from \$9,000. In a former report* the cost of the fish-ways at Lowell, Lawrence and Holyoke was estimated at \$22,000, *exclusive* of damages that might be paid to the Hadley Falls Company. Those at Lawrence and Lowell, now almost finished, will together cost from \$11,000 to \$12,000, leaving about \$10,000 of the estimate to be applied to Holyoke. The amount voted by the Commonwealth (section 14 of the Act,) was \$7,000, and of this there will be very little, if anything left by next spring.

* Senate Doc. No. 8, 1866, p. 29.

If fish-ways were put up on the Connecticut, a good deal of assistance in the breeding of young salmon might be looked for from the State of Vermont, whose Commissioners, Messrs. A. D. Hager and C. Barrett, have submitted an excellent report, containing, among other things, one of the best essays on artificial trout-breeding that can be found anywhere.

The Commissioners of New Hampshire have succeeded in procuring from New Brunswick, 15,000 or 20,000 salmon ova, which have been planted in good condition in the waters of the Pemigewasset. These ought to hatch next spring, and a portion of the young "smolts" would be ready to go down to the sea in the early summer of 1868. In May, 1869, when the apple trees are in full blossom, we should have our first run of "grilse" or half grown salmon. In May, 1870, the mature fish ought to come up the river, the females full of eggs and ready to seek their autumnal spawning-beds in the mountain waters of New Hampshire. But there will be no mature fish to come, or grilse, or smolts, or anything else, and the money of the State, spent for fish-ways will be as good as thrown into the river, *unless* proper laws be passed and enforced for the protection of the fish. In some parts of Maine it has been the custom to forbid all fishing for *five years* in a river that was to be re-stocked. With salmon and alewives this has worked well. The fish are at first few in numbers and timid in their migration, but, being unmolested for some seasons, they become numerous and bold, and at last penetrate into all parts of the river and its tributaries. In order to insure success in a river that has been entirely depopulated, some fish must be carried above its dams and there allowed to breed. Their progeny will next year surmount the dams, by the fish-ways, and return to their breeding grounds. In this way the Commissioners propose, next year, to carry a number of shad from below the Lawrence dam to the mill-pond above. Not only the time of taking fish, but the *manner*, should be regulated by law to the exclusion of all seines more than one hundred yards long, and all weirs and gill-nets.

The New Hampshire law requires that the chief *tributaries* of the Connecticut and Merrimack should be opened, as well as the main rivers, as soon as free passage is effected through the States lying between New Hampshire and the sea. And it

would seem proper that the Commissioners should be empowered, at their discretion, to notify proprietors of dams on the tributaries of these two rivers within this Commonwealth, to build fish-ways over these obstructions. Another power which should be given to the Commissioners, or should be incorporated in an enactment, is that of imposing penalties for fishing within four hundred yards of any fish-way, or for trespassing upon the prescribed limits of the fish-way itself. Such offences, at present, would come under the law of trespass, which could inflict no adequate penalty. These may seem vexatious details; so, also, hoeing potatoes is a vexatious detail, but it has a good deal to do with the crop.

As to the river pollutions, which, next to dams, are the chief destroyers of fish, it would be difficult so to frame an enactment as to meet all cases without doing injustice to many manufacturers. Still, something should be done about it; for, even though section 6, chapter 166, Revised Statutes, 1860, may be considered here to apply, it, at any rate, is not enforced. The specific effect of the pollutions thrown into the Merrimack by the great Pacific Mills at Lawrence has been corroborated by the investigations of the present season.* Many attempts, with a fine seine, to catch young shad in the neighborhood of these mills, even on the opposite side of the river, failed entirely; although specimens were always to be procured a little further down, where the water is pure.

It has been ascertained definitely, that the young fish do not remain in the river after the end of September, when they have attained a length of about four inches, [see plate,] and resemble the adult in form, but have not yet the lateral line of dark spots behind the head, which may be seen in the adult after the scales have been removed. The young taken in August show an extraordinary difference in size [see plate,] which goes to confirm the statement of the former Report* that the spawn is deposited at different times by different shoals of fish, and that, therefore, the broods of young will be more or less grown according to their ages. An examination of the

* At the suggestion of the Commissioners, this company is going to put a plank fence opposite each of their race-ways, which, doubtless, will prevent the pollution thence of the river.

* Senate Doc. No. 8, 1866, page 6.

stomach of a young shad showed that the food was chiefly certain minute water-beetles, together with a few mosquito-like insects which they probably spring at, like the trout. There were, mingled with these, some fresh water algæ such as compose the green scum on pools, but this vegetable matter may have been accidentally swallowed.

In conclusion, the Commissioners beg leave to submit the following recommendations:—

1. That the sum of ten thousand dollars be appropriated for the ensuing year.

2. That fishing with the seine, and taking of shad, or salmon, in any manner, be forbidden in the Merrimack River *above* the Lawrence dam until April 15, 1871, under the penalty of forfeiture of the seine, and of five dollars for every shad taken, and of fifty dollars for every salmon taken.

3. That fishing with the seine and taking of shad, or salmon, in any manner, be forbidden in the Merrimack River, *below* the Lawrence dam, from April 15, 1868 to April 15, 1870, under the same penalties.

4. That the Commissioners be allowed to take such fish as may be required to re-stock the river.

5. That a fine, not exceeding fifty dollars, be fixed, for fishing within 400 yards of any fish-way, or for trespassing within the prescribed limits of the same.

6. That the Commissioners be empowered, at their discretion, to cause any tributaries of the Merrimack, or of the Connecticut to be opened to the passage of shad and salmon, by directing the proprietors of dams on such tributaries to build suitable fish-ways over their dams.

All of which is respectfully submitted.

THEODORE LYMAN,
ALFRED R. FIELD,

Commissioners.

NOVEMBER 30, 1866.

Fig. 3.



Fig. 4.

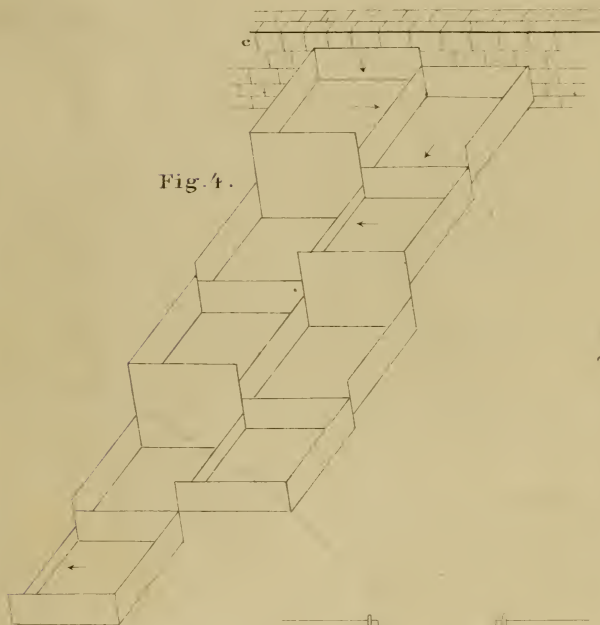


Fig. 5.

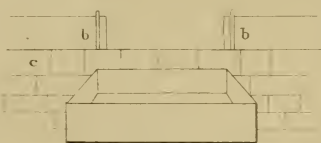


Fig. 6.

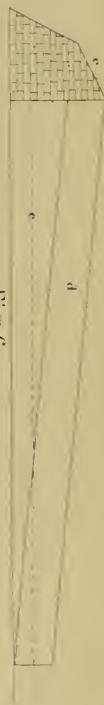


Fig. 1.



Fig. 8.

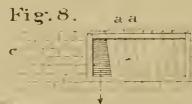


Fig. 7.

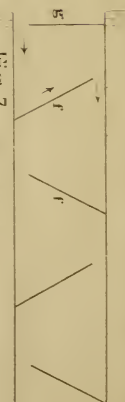


Fig. 2.



DESCRIPTION OF THE PLATE.

FIGS. 1, 2 and 3.—Young shad (*alosa prae-stabilis*,) before they have left the river, for the sea. Natural size. *Figs.* 1 and 2 show the differences in size in the different broods at the same date ; August 14. *Fig.* 3 is a young fish just ready to go down to the sea ; September 26.

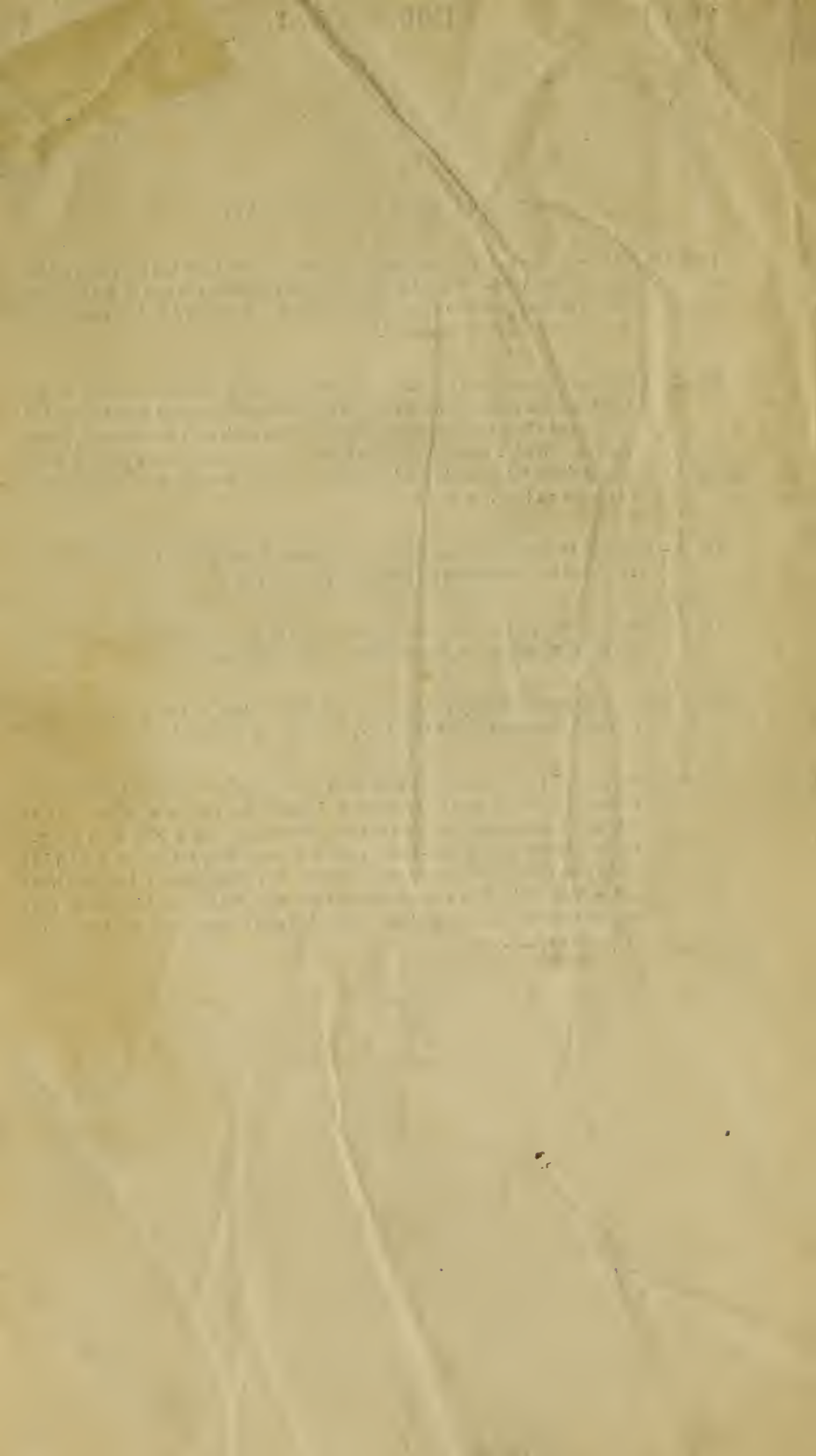
FIG. 4.—Diagram of the double Fish-stair, at Lowell, showing the arrangement of the tanks and the course of the water. The tanks are somewhat over twelve feet square and about two feet deep. The fall from each tank to the next, is one one foot. With 2 feet and 4 inches of water on the dam-crest, a floating body moved down the current of this fish-stair with an average speed of less than two miles an hour. *c*, the dam.

FIG. 5.—Diagram, to show how the width of the sheet flowing into the first tank, is regulated by flashboards (*b*) placed on the dam (*c*.)

FIG. 6.—Profile of Foster's fish-way showing the trough or pass (*d*) sloping from the dam (*c*) to the river-bed. *e*, the water-line, below the dam.

FIG. 7.—Plan of Foster's fish-way showing the up-stream slant of the cross-bulkheads (*f*) and the course of the water. *c*, the dam. *g*, the flood-gate.

FIG. 8.—Flood-gate of Foster's fish-way, seen from the face of the dam (*c*) ; *a a*, pieces of scantling, which may be removed to increase the volume of water. This fish-way is particularly adapted to small streams, because it uses little water. In the absence of any experiment, there is some doubt whether shad will freely pass through so narrow an opening as this plan shows ; but alewives and salmon will. The cross-bulkheads are made as high as the sides of the pass, so that the water runs deep. *Figs.* 6, 7 and 8, are drawn on a scale of 20 feet to an inch.



Mass: Commissioners on inland
fisheries and game

HOUSE.....

.....No. 60.

REPORT 534

OF THE

COMMISSIONERS OF FISHERIES,

FOR THE YEAR ENDING

JANUARY 1, 1868.

BOSTON:

WRIGHT & POTTER, STATE PRINTERS,
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Commonwealth of Massachusetts.

R E P O R T .

To His Excellency the Governor and Honorable Council.

The Commissioners of Fisheries, appointed under chapter 238 of the Acts of 1866, beg leave respectfully to present their Second Annual Report.

The fishways at Lowell and at Lawrence, as had been hoped, were finished, and the water let on, last spring; and thus the Merrimack was once again opened, after being closed for eighteen years.* Although the violent current could not be at once regulated in the long fishway at Lawrence, it is gratifying to know, that, notwithstanding this unfavorable circumstance, salmon passed over this dam, and over that at Lowell, and were taken early in June near Nashua in New Hampshire. It seems therefore reasonable, that the five years "jubilee" allowed by law to this river, assisted by artificial breeding, should make fish abundant therein.

Shad also appeared at Nashua, but it is not certain that these actually surmounted the Lawrence fishway, for about five hundred were, by order of the Commissioners, carried above the Lawrence dam; a difficult operation, because, this fish, like most of those with loose scales, is extremely tender, and survives neither confinement nor rough handling. They were

* The time that these passes were kept open, during the season, was from April 25th to July 1st, with a full depth of water; and from August 25th to October 1st, with not less than four inches of water. The Lowell fishway has been approved by the Commissioners; that at Lawrence needs a little more regulation.

taken with the seine about two miles below the dam; were at once put into a tank of cold well water, and carried in a wagon to the mill pond, where the wagon was backed into the river, and the fish speedily liberated. All attempts to transport them long distances failed; but it is yet possible that this might be done by icing the water till the fish was nearly paralyzed.* Just as a trout laid on moist snow will live for hours, though it would speedily die if exposed to a warm sun. In addition to those which were thus artificially transported, it is probable that a few passed up the fishway, because fishes, resembling shad or alewives, were seen going up. That eels found no difficulty was quite plain when the water was drawn off, and the whole floor of the pass was found to be alive with them, great and small. Like unwelcome guests they came many and early, and ready to devour all the spawn of useful fishes that they could find.

New Hampshire has completed the work on this river, by putting ways on all the important dams within her borders; and the experiments there have fixed the conclusion that "Foster's fishway," described and figured in the last Report, is by far the cheapest, simplest and most effective of those now known. (Plate III., figure 4; also Report for 1866, figures 6, 7, 8.) It is only where the space is limited that the box-way, or double stair, like that at Lowell, is desirable.†

The salmon ova, planted last autumn in the Pemigewasset, by order of the New Hampshire Commissioners, are thought to have done well; and the young parrs have been seen this autumn by Dr. William W. Fletcher, of Concord, who had this service in

* A very good tank for transporting live fishes is the one used by Mr. Francis Davis, of Keene, N. H. It is 2 ft. 6 in. long, and 2 ft. 3 in. high, and is made of staves sloping inward like those of a churn. Through the cover is inserted a little pump by which the same water is aerated by pumping over and over. (Plate III., figure 6.) Within is an ice basket to keep down the temperature. The tank used to carry up the shad was a simple box, with a slat cover, and lined with cotton stretched on frames to prevent the fish from bruising themselves.

† On the Susquehanna, at Columbia, Col. James Worrall has made a fishway by cutting a section forty feet long out of the dam, down to a level somewhat below that of the water underneath the dam. Beginning at this, at its lowest point, an inclined plane with sides (in other words, a trough,) is constructed *up stream*, in and beyond the thickness of the dam. Through this—what may be termed *reversed*—fishway the shad passed last spring in numbers, and, for the first time in nearly thirty years, were seen fifty miles above on this river and the Juniata. The result shows that shad not only return to their place of birth, but will, when occasion offers, penetrate *beyond* it.

charge, and who has successfully hatched and raised a number of parrs in a little spring near his house. Dr. Fletcher is just back from an expedition after salmon ova to New Brunswick.*

The great Hadley Falls dam on the Connecticut still remains unbridged to the regret of all persons interested in the restocking of this fine river. The last legislature, apparently assuming what nobody had any ground to assume, that the Hadley Falls Company would be ready, and were bound to build a pass over their dam, made no direct appropriations for this structure. It is true that the \$10,000 actually voted for restocking rivers and ponds† might, in part, be applied to making a fishway under the plea that this was among “appliances and structures useful for the passage of the fish.”‡ But then this sum would not be enough. In their Report of last year (page 3,) the Commissioners stated that \$10,000 was a minimum estimate for this fishway; and subsequent examinations have tended to raise this estimate to \$12,000 at the lowest, and to \$17,000 at the highest. It was further implied that the Hadley Falls Company considered themselves exempt from any liability in the premises. If the company has the law, it only remains to be said that one of our legislatures has put this Commonwealth in a position to be thwarted by a water power company whenever the Commonwealth should seek to render an act of simple justice to the States of New Hampshire and Vermont, by giving free passage to the migratory fish of the Connecticut River. It is true, that several lawyers of reputation have given the informal opinion that this company *was* liable to build a fishway; but the testing of such a question would involve legal delays, and the shad would be the sufferers. Moved by these considerations, the Commissioners endeavored to make a compromise, whereby the company should bear only a small part of the first cost, but should continue its interest in the structure by undertaking a portion of the expense of keeping

* He succeeded in bringing home 70,000 healthy ova, of which about 35,000 are at the establishment of Mr. J. S. Robinson, Meredith, N. H. The rest are in the hatching troughs of Rev. Livingston Stone, Charlestown, N. H.; and some of the fry are already out and doing admirably. The first hatched in sixty-two days from impregnation, an unusually short period.

† Chapter 344, Section 3, Laws of 1867.

‡ Chapter 238, Section 12, Laws of 1866.

it in repair. This overture was met by a flat refusal, accompanied by a hint at damages in case the State should put up a fishway. Waiving for a moment any rights in the case, the Commissioners then ordered the immediate construction of as much of the fishway as their money would pay for; but even this beginning was found impracticable on account of the unusually high water which would have made expensive cofferdams essential. Nor does the evil rest here; for the company at Turner's Falls, also relying on the condition in their Act,* displayed a *solers cunctatio*, and wisely regarded the Holyoke dam as a good shield between themselves and the enemy. These delays, be they right or wrong, on the part of private corporations, are the more to be regretted, because the State has shown the utmost activity and good faith in trying to repair any injuries to fisheries whether at home or abroad; and it is proper to add, that on the Merrimack River the companies have shown a large spirit, and have been ready to go beyond what the law absolutely required of them.

The law passed at the last session,† together with the progress of the work in hand, have turned the attention of the Commissioners to various plans for restocking our waters by artificial or natural propagation. As this whole subject, though not new, is certainly *novel* to our people, it is well to consider to what point we have come, here in New England, in the matter of animal food. We have come, then, to good beef at 35 cents a pound, poultry at 33 cents, sea fish at 20 cents, and other things in proportion. As to game, we have come to grouse, venison quails and ducks, brought 1,200 miles by railroad, and sold at high prices to people who can afford such delicacies. Time was, when our country boys could go to the next brook and catch enough good trout for a meal; now, one may buy a pound trout, if he has half a dollar wherewith to pay for it, and he will probably get a newly spawned fish, speared in its bed, and which the fish-monger is prepared to prove was "caught out of the State!" People complain, and the legislature passes game laws, and nobody pays any attention to them after they are passed. Why? Because we insist on considering wild animals as our remote forefathers considered them, when men were

* Chapter 275, Section 4, Acts of 1866.

† Chapter 344, Section 3, Laws of 1867. See Appendix, B.

scarce and wild animals were plenty. In a new country, the first settlers may properly have, not only liberty, but in some things license ; license to till land anywhere, to cut wood anywhere, to shoot and trap game anywhere, to catch fish anywhere and in any way. All such things are then too plenty. As population increases, land and wood become PROPERTY, until, as in Tuscany, the one is cultivated by the square rod, and the other, as in Paris, is sold by the pound. This is the march of civilization ; but in our march of civilization we have very thoughtlessly trampled under foot a most valuable *property*, because of a vague idea that it was game, and, by immemorial right, belonged to anybody and to everybody. And, to-day, there is many an honest fellow who might safely be trusted with untold gold, but who, nevertheless, would not scruple to steal trout from your brook. This feeling gets strength from the loose impression that game, like the Indian, is doomed, and that the last shad or trout is soon to be caught,—a sort of Dr. Fear-the-worst theory,—

“The former did maintain
The man would take all medicine in vain.”

This kind of sentiment is shown by the uncomprehensive way in which legislative committees often receive applications from people who petition for the control of particular streams, or creeks, or ponds, for the purpose of raising fish or oysters in a systematic and economical way. At once the members begin to ask whether this control would not abrogate some grant of the Pequot Indians to Fear-the-Lord Crowell, in the year 1639 ; or some ancient right of the inhabitants of Harwich Centre to dig one peck of quahogs per man on that particular ground.

These same committee-men would not treat a petition for a railroad or a cotton mill in this way, and simply because they *believe* in the success of a railroad or of a mill, but they do not believe in and do not know about the success of fish or oysters. Let our people once clearly understand that these fish and these oysters are real *property*, to be increased and to be raised in value like other property, and there will be no more difficulty about the rights of owners.

It must be confessed that such scepticism is not without good grounds. Laws have hitherto done little to check the destruc-

tion of valuable fishes, and that from the rivalry of the very men who should support such laws. This state of things was very plainly shown at the recent hearing before the Committee on Fisheries of the Connecticut Assembly. There was a mass of testimony, both sworn and informal, from fishermen. The owners of pounds or weirs averred that the seiners were very destructive, but that, as to pounds, they absolutely increased the fish, because of the sharks and other predatory animals which they caught. The "dragmen" or gill-netters were emphatic in declaring that theirs was, *par excellence*, the legitimate mode of taking shad. Their nets were only for a part of the day in the water; they stood, not perpendicularly, but at an angle; they were not too long; and, above all, they entrapped so many spawn-eating eels that they might be considered as real benefactors, who took but a small commission on the vast benefit they did. If there was blame, it lay at the door of the weir people, who took all the young fish. The seiners or pier fishermen said that their nets were short and had large meshes; that they made a sweep or two and then left the river free; but as for those gill-nets, they cut the fish cruelly, and wastefully killed many that were not caught. Nearly all agreed, however, that the fish had diminished in numbers and in size, but they attributed this failure, with striking unanimity, to the Holyoke dam; whereas the Massachusetts fishermen laid less emphasis on the dam, and seemed to think that the seiners, pound-men and gill-netters at the river mouth got the lion's share of the prey. Not even on such a question as the *direction* of the run of shad, could these men, some of whom had fished for seventy years, be brought to agree; for, whereas many of them were confident that the shad struck in from the direction of Montauk Point, and consequently were only taken on the east sides of the pounds set west of the river's mouth, others were equally sure that they came from the *westward*, and were as often taken on the *west* faces of the pounds.

A parallel to all this may be found in the proceedings of a late royal commission on sea fisheries, of which the Hon. Shaw Lefevre and Professor Huxley were members. Their industry was extraordinary; and the piles of evidence were such as to leave the impression that every fishwife in the three kingdoms had had her say. The "trawlers" were vehement against the

“set-hook” men; and the “set-hook” men were furious against the “trawlers.” The commission decided that they all were right, and might fish when, where, and how they pleased; and, as to *open sea* fishing, what little man could do to abate them was nothing, and the fish were, on the average, as plenty as ever, and were likely so to remain. But, just then, Mr. Bertram comes out with his “Harvest of the Sea,”* in which, by fact and figure, he aims to show just the opposite; namely, that the open sea fish *have* decreased by over-fishing. In the investigation of our river fisheries, we, at least, are thus much better off, in that we agree the catch has *diminished*.

How are these shad fisheries conducted? In three ways, chiefly, viz.: by seines, by gill-nets, and by weirs. Seines or sweep-nets are made of a depth which varies with that of the river, and of a length yet more variable. Those of the Merri-mack usually do not exceed 300 feet; while those used on the Potomac are so bulky that they must be paid out from a barge rowed by twelve or sixteen men; and they suffice to inclose considerable bays in that stately river. The method of hauling the seine differs with the weight of the instrument itself, and with the nature of the landing-place. Commonly one end is kept on shore while the other is swept round the school. If the bank or beach be smooth and sloping the seine is at once drawn in, either by hand or by a capstan, as soon as the water end is brought ashore; but, if there be extensive flats, or a bad bottom, between the channel and the firm land, then a pier is sometimes built out, and the seine is brought in at the end of it. At Fancy Hill, on the Delaware, this difficulty is got over in another way: a line is carried out for 400 fathoms over the flats; the seine is swung across the channel, and a similar line, attached to the water end of the seine, is brought back to the river bank, and by these lines round capstans, the haul is laboriously made. It takes two hours and a half.†

Gill-net are simple in form, like seines, but made of a fine twine not easily seen in the water, and with a $5\frac{1}{2}$ inch mesh.

* A useful book on account of the statistics and the scattered information it contains. But it would be for his advantage if Mr. Bertram would study the rudiments of ichthyology. He describes the “Vendace” and the “Pollan” as if they were land-locked herring; while he states that they are *Coregoni*, being plainly ignorant that *Coregonus* is a genus not of Clupeoids but Salmonidæ.

† Letter from Mr. B. P. Howell.

The regulation mesh of the Connecticut used to be 6 inches; but it is agreed that this size would now-a-days take few fish, which corroborates the general opinion that the average shad are smaller than they once were. This diminution is laid by the estuary fishermen to the favorite Holyoke dam; but, inasmuch as the best spawning beds are below that dam, and furthermore, the principal growth of the shad takes place in the sea, it seems reasonable rather to lay it to over-fishing—a result that has followed the same cause in the salmon rivers of Scotland. In depth the gill-net is usually about 16 feet, and its length varies with the breadth of the river. Those of the Delaware were limited to 60 fathoms; but this restriction, like those of the Connecticut River, has been ignored. It is a snare that needs concealment, and is therefore used by night, or in turbid water. It is allowed to drift with the current, or with the tide, and the tender shad getting entangled by the gills are speedily suffocated. It is pretty well established, also, that a very great number break loose, but die of their injuries; for a small hurt will kill a fish, if that hurt be in the nature of a scrape or bruise. Even the hardy trout is often killed by the gentle handling necessary for obtaining the spawn. In this case a growth, apparently confervoid, appears on the bruised surface, and the fish soon sinks under it. These skin injuries among fish seem truly comparable to those superficial burns of the human body, which, apparently far from serious, are in truth so often fatal. It may be further noticed that a clean cut through of some severity, is, in both examples, curable. It is often said that few dead fishes are seen *floating* in the neighborhood of gill-nets; but, as a fact, fish killed in this way often or even generally *sink*. Another sort of gill-net is stretched on stakes along tide-flats, and the shad get gilled as they try to retreat with the falling tide. These are used near New York to take the Hudson River shad. The night work of the “dragmen” has given them a cause of opposition to the present law of Connecticut, for, say they, the close time is between Saturday evening and Monday evening, so you take two *nights* from us, but only one *day* from the seiners. Such objections only illustrate the impossibility of making laws to suit everybody, or even anybody. It is the old fable over again of the miller and his son who took the donkey to market. The

millers at last determined to act as he thought best; and legislators may well come to the same determination without the miller's whiffling experience.

A pond, or weir, is an old and singular contrivance whose success depends upon the fatal principle of fishes never to turn a sharp corner. A place is chosen, where it is known that large schools are accustomed to coast along, parallel with the shore; and there a barrier is run out in a straight line. This barrier is called the "leader;" and may be a stone wall, a fence of laths or of brush, or a net stretched on poles. At the end of this leader, and like a spear-head on its handle, is constructed a heart-shaped inclosure or "pound" having a narrow opening on either side next the point of the leader. On its off-shore end this heart again opens into a circular inclosure called the "bowl." A school coasting along shore is suddenly stopped by the leader, and immediately the fish turn towards deep water, and, swimming parallel with the barrier, pass into the heart, whence there is no escape save by a sharp backward turn, which, as before stated, is against their principle. Therefore they swim round and round, and pass into the bowl, where they are left by the tide, or, if the bowl be in deep water, they are hauled up by a net-bottom. The pounds of the Connecticut have a net leader of from 700 to 1,300 feet, set on poles, 25 or 30 feet long, driven into the sand.

The mesh of the leader is usually from $4\frac{1}{2}$ to 5 inches; that of the bowl from $2\frac{1}{2}$ to $2\frac{3}{4}$ inches, and capable, therefore of taking very small fish.* These pounds are all outside the mouth of the river, and to the *west* of it, because, for whatever reason it may be, very few shad can be got east of the river mouth. It is maintained by some, that the fresh water from the river "bows out" to the westward, and that the shad

* The average yearly take of shad in Connecticut is estimated as follows:—

82 gill-nets, within Connecticut,	. . . . .	164,500
16 pounds, " "	. . . . .	112,000
Pier Seining, " "	. . . . .	150,000
Seining, above Essex, " "	. . . . .	100,000
Seining, within Massachusetts,	. . . . .	102,000
Total,		628,500

There are, however, some years of scarcity, as in 1853, when the best Saybrook pound got but 1,700, or one-fifth the average. The take on the Merrimack only from Lowell to the sea, thirty-two years ago, was estimated at 365,000, which will give an idea of what our fisheries *ought* to be. (See Report for 1866, page 39.)

seek it: by others, that the fish come from the west, and are not affected by the fresh water which spreads on both sides of the mouth; and still by others, that they come from the direction of Montauk Point, diagonally, and that they strike directly into the river, or glance to the westward of it, seeking the little crustacea known as sand-fleas, and which are said to be their favorite food.

To the general question of the periods and directions of the migration of fishes we can look for no reliable answer until we can get the facts in a scientific form. And it is, therefore, gratifying to know that Professor Peirce, the present Superintendent of our Coast Survey, has answered the Resolves of several of the New England States* by directing such information to be got along our coast, as may, when combined, furnish such an answer. The chief elements of the general questions are these:—

1. At what periods do the salmon, the shad, &c., come into, and go out from, our rivers?

2. When they go out, do they remain near the river mouth, or do they stand out far into the deep sea, or do they retreat in a direction parallel with the coast, to the warmer waters of the South?

3. When they come back do they pass from south to northward, like the brigades of one great army, which, as it passes, gives off to each river its quota, or do the natives of each river simply stand in from the sea, immediately outside its mouth, where they have lain till the instinct of propagation should once more call them to fresh water?

Doubtless many people feel already prepared to answer these questions, but should we put to them such queries as these: How many successive “runs” of shad are there in each river? On what does the succession of these runs depend? Do they always spawn before leaving a river, or do they pass several times in and out before that act? How long does each school of shad remain in a river? What is its rate of progress up stream, and on what does this rate depend? How do you regard the so-called “barren” shad, which are taken near Monomoy Point, at a season when others are spawning in the Connecticut? etc., etc., or,

* See Appendix, B.

again, What are the precise periods at which the salmon of different ages (the smolts, the grisle, and the grown salmon) go to and return from the sea? What are the so-called early and late runs on some Canadian rivers, for example, in the north branch of the Miramichi? Are these runs of different individuals, or are they of the same individuals which have gone down and have come back again? How do you regard the salmon taken at sea, and in fine condition, at seasons when most of them are in the rivers? etc., etc. To all a very insufficient answer would most likely be given.

The different classes of fishermen, and the different modes of fishing, have been considered at some length, in order to show that *laws alone* will scarcely provide for a great increase of our valuable fishes, and this because there is a greater or less opposition and rivalry among those classes, which breaks up unanimity of *protection*, while the effect of their combined action is unanimity of *destruction*. That good laws will be a wholesome check there can be no doubt, but they alone will not suffice to make our rivers and ponds a sure source of abundant food in the same sense that our pastures are so.

There lies, perhaps, a remedy in our own hands, and that remedy is *Artificial Breeding*, a sowing of fish, just like a sowing of corn. People will at once ask, what advantage is there in artificial over natural propagation; why not let the fish breed in their own way? This question may best be answered by another: What advantage is there in sowing, over wild growth? Why not let corn grow and sow itself in its own way? Or, in a less striking form, what advantage is there in good cultivation over bad? Suppose two equal quantities of corn sown, and the product gathered and again sown, for three successive seasons, and suppose the one were ill cultivated, and so produced only ten bushels to an acre, while the other were well cultivated and produced seventy bushels to an acre. Then the increasing ratio of the two products, at the end of each season, would be as seven to one, and for the three seasons, 7: 1—49: 1—343: 1. In other words, at the end of the third season where the poor cultivation had produced one bushel, or one quart, the good would have produced three hundred and forty-three bushels, or three hundred and forty-three quarts. Turn now to a living animal and see if there be any analogy in what is

called the “waste of nature,” (though more properly the *prodigality* or the balance of nature.) We may select the salmon, because the long study of this animal in Great Britain has given us many good data to go upon. The problem will be complex, but a simpler one will follow in the shad. We must premise in general that newly-hatched salmon are called *new parrs*; they remain one year in fresh water, then *one-half* the brood take on silvery scales, are called *smolts*, and go down to the sea; the other half of the brood remain another year in fresh water, and are called *yearling parrs*, when they too change to *smolts* and go down to the sea. We will assume (what may not be true) that all smolts going down to the sea return the following autumn as *grilse*, i. e., half-grown fish, of three or four pounds weight, and ready to spawn. These once more go to the sea, and on their return are called full *salmon*, and weigh eight pounds or more. We will further assume that grilse and salmon lay about one thousand eggs to each pound of their weight, and that about five in every seven are females, of which some pair with the male *parrs* in the river. In order to make a table of yearly increase we have now only to find what proportion of young fish survive each stage of their existence. Comparing the statistics of Mr. T. T. Stoddart * with those of other authorities, the following fraction may be deduced:—

	$\frac{1}{3}$	$\frac{1}{3}$ of eggs hatch, and become <i>new parrs</i> .
	$\frac{2}{15}$	$\frac{2}{3}$ of these parrs grow to be <i>smolts</i> .
	$\frac{1}{150}$	$\frac{1}{20}$ of these smolts grow to be <i>grilse</i> .
	$\frac{1}{1500}$	$\frac{1}{10}$ of these grilse grow to be salmon.

Hence it would appear that of fifteen hundred eggs of salmon laid in the natural way, only *one* at last produces a full grown fish. From the foregoing data the following table may be calculated, which is intended to exhibit what twenty thousand eggs would come to in three years if naturally deposited in a river.

* Bertram—Harvest of the Sea, p. 111, etc.

Beginning of First Year.	Beginning of Second Year.	Beginning of Third Year.	End of Third Year.
20,000 Ova.	7,000 New Parrs.	$\left\{ \begin{array}{l} 3,500 \text{ Year Parrs.} \\ 70 \text{ Grilse.} \end{array} \right.$ 150,000 Eggs.*	70 Grilse. 7 Salmon. 50,000 New Parrs. 200,000 Eggs.†

That is to say, these 20,000 eggs would, in three years, give less than eighty fish fit for the table, and a quantity of young ones and eggs, of which a very small proportion would ever arrive at maturity.

By the shad, thanks to the admirable experiments of Green, (Appendix, A,) we may illustrate the results of natural and artificial propagation side by side. We assume that the male is fecund at one year, that the female carries spawn at two years, and lays from 10,000 to 12,000 eggs to each pound of her weight, and that males and females are in equal numbers. Considering what is known of the hatching of the eggs, by the natural process, and assuming that the young are destroyed in the same proportion as those of the salmon, the following fractions may be deduced:—

$\frac{5}{8}$	$\frac{5}{8}$ of all eggs laid, get impregnated and escape being eaten by other fishes.
$\frac{1}{80}$	$\frac{1}{50}$ of these hatch.
$\frac{1}{4000}$	$\frac{1}{50}$ of those hatched grow to one year.
$\frac{1}{20000}$	$\frac{1}{5}$ of the yearlings grow to two years.
$\frac{1}{40000}$	$\frac{1}{2}$ of the two-year-olds grow to three years.

It would hence appear, that of 40,000 eggs of shad laid in the natural way, only one arrives at the age of three years. Now suppose two pairs of adult shad should come to a river each year, for three successive years, and there breed; what

* Say from 50 female Grilse of 3 lbs. each.

† Say from 50 female Grilse of 3 lbs., and 5 female salmon of 10 lbs.

would they and their descendants amount to at the end of that time? The following table calculated from the data foregoing will answer this question.

Natural Breeding.

Beginning of First Year.	Beginning of Second Year.	Beginning of Third Year.	End of Third Year.
4 Shad.	{ 4 Shad. 1,750 Young.	{ 4 Shad. 1,750 Young. 35 Yearlings.	4 Shad. 35 Yearling. 7 two-year-olds.
1,750 Young.	35 Yearlings.	{ 7 two-year-olds. 1,750 Young.	3 three-year-olds. 35 Yearling.
Total,			84

Even at this rate, and allowing that all shad die at three years old, the number of three-year-old fish in a river, derived from a single pair, would double in about eight years, although, for several years, there would be, of course, no three-year-olds at all in the river, the original pair having died. But, since the number of the largest fish is always small, compared with those of less size, and as these large ones are most liable to get caught, it may well be understood that the river fishermen think that both shad and salmon have "decreased in size," and that they are obliged to make their net-meshes smaller. The gain by artificial propagation of shad, lies at the very outset, and consists in the increased percentage of spawn that may thus be hatched; the ratio of the artificial to the natural being at the most moderate estimate, as seventy-two to one. Starting with this difference, and taking the other proportions just as in the above table, we should have the following results from the artificially hatched spawn of two pairs of large shad, taken three years in succession, *added to* the spawn of their mature progeny within that period:—

Artificial Breeding.

Beginning of First Year.	Beginning of Second Year.	Beginning of Third Year.	End of Third Year.
*126,000 Young.		*126,000 Young.	2,520 Yearlings.
	*126,000 Young.	2,520 Yearlings.	504 two-year olds.
	2,520 Yearlings.	504 two-year-olds.	252 three-year-olds
		†3,969,000 Young.	158,760 Yearlings
Total,			162,036.

Compared with the former table, the results in favor of artificial propagation are as 162,036 to 84, or, as 2,000 to 1, nearly. This is nothing unbelievable, when we see what a difference was made in corn, by a poor or a good cultivation. But it is a difference that ought to call the attention of all thoughtful persons to this subject. It would be very little labor or expense to set free 100,000,000 young shad in the Connecticut, and these might reasonably be supposed to return us nearly a half million of two-year-old fish. Fifteen hundred large females would yield the required amount of spawn, and this is not more than a half of one per cent. of the females now yearly taken in the river.

The Commissioners intend, if possible, to make experiments next summer on a large scale, both in the Connecticut and Merrimack Rivers. If seconded by the authorities of Connecticut, there is no reason why the fisheries, within two or three years, should not be a good deal augmented. Once show the fishermen that shad are increasing, and salmon are coming in, and they may be relied on to support measures which they now regard with excusable indifference or incredulity. All new things are hard of introduction. When the fishway at Lowell was building, some of the factory superintendents (very intelligent men about *factories*,) said, that the fish must have a schoolmaster to teach them to go up those steps! The next

* From the eggs of two females:— $\frac{9}{10}$ of 140,000.

† From the eggs of the two-year olds.

year shad and salmon *did* go up, and without any schoolmaster. The nearer we get to the truth, the more it stands out, that artificial propagation and free passage over dams, are the two great conditions of restocking rivers. The question of pollution assumes a smaller proportion. It now appears that sawdust does not kill trout, but their *spawn* only, and that chemicals, unless in unreasonable quantity, do not much affect a great stream. The dreaded Winsor Locks turn out to be comparatively innocent of the destruction of young shad. Reasonable care and just regulations will keep all these pollutions within bounds, and render our streams fit habitations for their people. Shad are by no means the only fish that may be increased by artificial breeding. The salmon has already been spoken of, and a table has been given to illustrate this part of its history. Indeed, it may be bred with more certainty than the shad, because the young may conveniently be kept and protected from natural dangers, till the age of one or two years. The fisheries of the Tay have increased ten per cent. in value, by the annual introduction of 150,000 artificially hatched smolts,* and this is an important increase in a river whose yearly yield is 70,000 fish; 150,000 ova may be hatched in a shallow trough, a foot wide, and fifty feet long, and the fry may be kept in pools of small extent, provided the banks afford abundant insects, worms, etc., for food; and provided further, that there be a strong current of cool spring water constantly flowing through. Of the smolts liberated, one in twenty-five was afterwards caught, as a marketable fish. If this be a fair generalization, it would follow that if, 1,000,000 smolts were yearly set free in the Merrimack or the Connecticut, the annual catch of the river, from this source alone, should be 40,000 grilse and salmon, which, at an average of eight pounds, and at forty cents a pound, would be 320,000 pounds, worth \$128,000. A million of ova would be the product of one hundred females, each of ten pounds weight; sixty or seventy males, and small ones at that, would be plenty for the impregnation of the batch. Two hundred fish (to allow a proper margin,) ought to produce enough impregnated eggs to raise a million of smolts.

Therefore the return of marketable fish should be as two hundred to one. Let it be remembered that what here stands

* Bertram—Harvest of the Sea, p. 111.

only on paper, may, with the same pains that produces a crop of wheat, be illustrated by an accomplished fact. It has been so illustrated in England, Scotland and Ireland.* And yet our clever people go on, year after year, putting up more thousands of spindles, and flooding the market with unsalable cotton goods, when, from the very water which turns their wheels, they might coin money, with no other machinery than a net and a hatching trough! Thirty years ago, no fresh salmon were brought to our market from the British Provinces, simply because the Penobscot, the Kennebec, and the Androscoggin were full of them, while the Canadians had already exhausted the tributaries of the St. Lawrence, above and including the River Jaques Cartier. *Now*, we have shut out the fish by high dams, such as those at Augusta, at Great Works, &c. But the Canadians, by wise legislation, have re-peopled their streams, and the St. Lawrence at present boasts eighty-seven salmon tributaries.† The English are pursuing a similar course, and in such rivers as the Wye, where the salmon was extinct a few years ago, there are now many. The English have gone further, and after several failures, have triumphantly succeeded in getting salmon spawn to Australia, which have hatched, and the young have gone to sea, and have returned large fish to the river. After the salmon proper, the so-called “land-locked salmon” deserves attention. It is found at the upper waters of the St. Croix River, and in Sebago Lake, in one of whose tributaries, Crooked River, it is captured when it runs up to spawn in November. They average there about four pounds in weight, but grow as large as sixteen pounds. The young are very agile. Some of them, bred artificially by Mr. Robinson, at Meredith, N. H., were put, when quite small, in a tank, into which, from a height of nine inches, fell a stream of water flowing through a one-and-a-half-inch hole; whereupon the lively parrs leaped up the stream, and into the upper tank, like harlequin going through a clock-face.‡ There is a similar

* In 1863, Scotland, Ireland and Wales, a territory about the size of New England, furnished to the London market alone, 3,712,016 pounds of salmon. The fishing rents of the Tay, in 1852, was less than £8,000; in 1864 it had risen to £15,000. Now let any one look at the map of Maine, with her thousand lakes and rivers, and imagine what riches *ought* to dwell in those waters!

† Communication from Mr. Nathan Cummings, of Portland.

‡ Report for 1866, p. 10.

salmon in Lake Wenern, the "Vetterns, Silfver-lax" of the Swedes.

Dr. Günther* considers it a distinct species of lake trout, and describes it under the name of *Salmo hardinii*. The best defined specific difference he points out is, that the tail-scales are smaller than those of *S. salar*; but as he had only a single specimen for study, his conclusion must be taken with caution. Nor can his assertion be accepted that "we have no evidence whatever that a migratory species has ever been changed into a non-migratory one. In Jamaica Pond, Massachusetts, and in Lake Winnepisseogee, New Hampshire, the common smelt, (*Osmerus viridescens*) lives entirely cut off from salt water. They were put in Jamaica Pond, near the close of the last century; and they have been introduced for many years in Lake Winnepisseogee. As in the land-locked salmon, their size has diminished a good deal. That captivity is not necessarily fatal to the salmon, is shown by the fact that a smolt has been kept three years in the Stormontfield ponds, and continued to thrive and grow.† The trouts in general, but especially the salmon proper, are fish of a hard, rich meat, which keeps well, and is nourishing food. The salmon has the further advantage of getting a great and rapid growth by going to the sea. And in general, the migratory fishes are especially

* Catalogue of the Physostomi of the British Museum. A. Günther: 1866. Dr. Günther makes a very creditable attempt to get some data by which the maze of this group may be unraveled. From the form of the preoperculum, the number of rows of scales above the lateral line, the length and number of the appendices pyloricæ, the number of vertebrae, &c., he hopes to draw such data. It is, therefore, much to be regretted that the British Museum afforded this learned ichthyologist such meagre materials for some parts of his study. He names whole series of species, without quoting any specimen at hand. And this is especially true of the American trouts. It is hardly to be believed that his collections contained nothing of our common brook trout save stuffed skins, which, in the present state of science, are next to useless, and are fitted rather for amateur show cases or curiosity shops than for the shelves of a great museum. This poverty of material has led our author to admit a great number of ill-described species, and, consequently, we have the appalling array of 82 under the single genus, *salmo*. It is true that he criticises here and there, as in the case of Mr. Breevort's Japanese plates; and it is a great pity that he did not go further and demolish the species of Girard, in the Pacific Railroad survey; for nothing can be more preposterous than the attempt of this writer to manufacture zoölogy out of dried heads, and skins without fins! In regard to those trouts described from personal examination, we cannot too much thank Dr. Günther for the admirable details given by him; at the same time, we may be allowed to suspend judgment as to the existence of so many species as he gives, when we reflect that in Great Britain alone he establishes six distinct charrs, (*S. umbla*), and when we further observe that he uses the hypothesis of hybridism to explain some intermediate-forms.

† Perth Courier, May, 1861; quoted by Bertram, p. 109.

to be encouraged, because they require no feeding, and are sure of abundant nourishment in the ocean. Next may be mentioned the several species of our White Fish, (*Coregonus*), all excellent for the table. Could they be artificially bred in our larger ponds, they would form an important addition to our water culture. Besides those of the great lakes, (*C. albus*, *C. sapidissimus*, etc.), there is a smaller one (*C. Novæ Angliæ*), in Lake Winnipisseogee, where it is known as the "Shad-waiter."

The black bass (*Grystes fasciatus*) is a perch-like fish, and lives by preference in lakes and large ponds. Its flesh is excellent, and it attains a size of from 2 pounds to 7 pounds, according to food and situation. In 1850, Mr. Samuel T. Tisdale, of East Wareham, succeeded, after much care, in bringing twenty-seven from Saratoga Lake alive, to his place, where he put them in Flax Pond, close to his house. In 1851, and again in 1852, others were brought, and several of the neighboring ponds were stocked. The matter was kept secret, and a "jubilee" of five years given to the fish; at the end of which time, they were found to have peopled these ponds, and to have grown finely. So soon as this fact was known, all the neighborhood at once gave its assiduous attention to poaching, indignant that any one should be so aristocratic as to try to furnish cheap food to the community! Their efforts were so far successful as much to reduce the number of the fish.

The black bass takes a fly, a "spoon," or a moving minnow, during the summer months, and makes, when hooked, a hard fight; rushing hither and thither, and springing into the air as actively as a trout. In late autumn it will bite at a standing bait.

During May they come by pairs, and make a spawning bed on a sandy bottom in from 4 to 6 feet of water. This they sweep with their tails after the manner of trout, and the male remains on guard over the spawn; and drives away the many intruders which hang about greedy for this savory food. In June, the young,—recognizable by a black band across the tail,—are first observed, and these, by autumn, have grown to a length of three or four inches. At one year old, they weigh from $\frac{1}{4}$ to $\frac{1}{2}$ pound, and increase about $\frac{1}{2}$ pound yearly, till they arrive at 6 pounds or 8 pounds, according to food and water.

They are in prime condition in August and September, but in winter are black and lean. The objection in certain cases to this species, is its great voraciousness. It destroys almost everything before it except the perch, and even kills out pickerel by devouring the young. But in ponds already infested with pickerel and abounding in "shiners," it may be introduced with much profit, because it replaces bad fish by good. It should be carefully excluded, however, from all waters that contain trout, white fish, or other valuable species, and from ponds *communicating* with such waters, for it is a most restless and pushing robber, eagerly searching and following the inlets and outlets of its pond. Of this propensity the Brookline reservoir gives the most curious instance. Nine black bass of $2\frac{1}{2}$ to 3 pounds were put in there in July, 1862. Since then, in the examination of the water pipes leading from this reservoir to Long Pond, these fishes have been found in considerable numbers and of large size; and, moreover, either by their young or their eggs, they have penetrated the screen at the mouth of the pipe, and have appeared in the pond itself!* So these black bass, apparently impelled by no other feeling than that of restlessness, performed an underground journey of fifteen miles, in a brick aqueduct whose greater diameter was six feet!†

The alewife, (*alosa tyrannus*), although very inferior to the species above cited, is valuable, first, on account of its great prolificness, and secondly, because in its ascent from the sea, it will penetrate in vast numbers the smallest brooks. At the spawning season it is extremely tame, and will crowd into the locks of a canal, or any unusual place, whereas the shad is much more shy, and only affects the more open parts of a stream. On the Agawam River, the alewives, after passing up a small ditch, whose lower end was among the clatter of mill-wheels, and 250 feet of which were covered, pushed through an underground drain a thousand feet long, in order to get to the pond where they spawned. This underground drain became stopped, and the young alewives could not get to the

* Communication from Mr. John H. Thorndike, President of the Water Board.

† Arrangements have been made with Mr. Tisdale to stock several other ponds, and the work is already begun. The best time to move the live fish, is in the cool weather of late autumn or of early spring.

sea. Some of them were taken in January, and had not grown since October, for they were no bigger than in that month. Others, taken afterwards, were two-thirds of their natural size; but whether these last were old fish, that had been shut in, or whether they were land-locked young of a previous season, or of the same season, could not be determined. In a brook whose water was so cold that the alewives avoided it, Mr. Tisdale tried an important experiment. He put a dam across, and in the pond thus formed put live alewives. These bred there, and they and their young passed over the dam to the sea. The next spring, large numbers of alewives passed up this brook, for the first time on record, and were seen leaping at the face of the dam, in vain attempts to surmount it. This is a crucial experiment, so far as concerns the theory that a fish returns to its birthplace to spawn, even under an unfavorable condition, (cold water,) but it does not certainly prove that the alewife gets its growth in a single year. For those that were seen might have been the original breeders, together with some companions which they led from their usual course up the warm stream. So far as is known, neither the alewife nor the shad get their growth in less than four or five years. The instinct of return to birthplace is not absolute among these migratory fishes; there are apparently certain stragglers—wrong-headed individuals, which, like some men, refuse to do a thing simply because others *do* do it. And again, the instinct may be modified by circumstances. Thus in 1848, when the Merrimack was closed by the Lawrence dam, the alewives, finding their path barred at that point, faced about, descended the river, coasted along shore to the Ipswich River, and, to the astonishment of the inhabitants, suddenly filled that little stream almost solid. A similar fact was reported in the British Provinces, where the salmon, alarmed at the change in shape of a river's mouth by new stake-nets, quitted the Natashquan, and entered the neighboring Kegaska, where they were recognized by their superior size.* On almost all our streams, the alewives have been exterminated by weirs, by scoop-netting, and especially by dams, which shut them from their favorite ponds.

* It was some such straggling salmon that last spring ran up the Merrimack. Five were taken below and four above the Lawrence dam, whereas a single visitor is usually a rarity.

But if our people will imitate the action of those interested in Mystic River,* they will get the fish back in great abundance. The Act (chap. 149, 1867,) simply forbids fishing for five years, and the people themselves have seen that a suitable fishway is made over the dam at the outlet of the pond. This action must come from the people themselves. It has not been the policy of the Commissioners to force reforms upon the public. They have tried to publish all important information on the subject, and have held themselves ready to aid those who asked for advice or for the protection of the laws. To extend and to unite their influence, the Commissioners of Maine, New Hampshire, Vermont, Massachusetts and Connecticut have made an informal association under the name of New England Commissioners of River Fisheries.† They hold meetings from time to time, and endeavor to establish a common policy for New England, in the attempt to restore our indigenous fishes and to introduce new ones. In conclusion, the Commissioners beg leave to present the following summary of their present position and requirements.

1. As to *money*. Of the appropriations respectively of \$7,000 and of \$10,000, there will probably remain subject to their draft, at the close of this year, about \$10,500. During the next year there will be needed, for the prompt erection of the great fishway at Holyoke, a sum of \$15,000 to \$17,000, and for the important attempts in the artificial breeding of fish, on a large scale, not less than \$5,000, or a total of \$22,000. As there will doubtless be over \$10,000 on hand to begin with, a *further* appropriation of \$12,000 ought to suffice.

2. As to *laws*. Those now in force seem enough; and it only remains for this Commonwealth to comply with the condition made by Connecticut in the law passed by her last Assembly, [Appendix, B,] by which the taking of shad in the Connecticut River is forbidden, except between the 15th of March and the 15th of June, and between sunrise of Monday morning

* See Appendix, B.

† The following are the names and address of the members:

Maine—Charles G. Atkins, Augusta; N. W. Foster, East Machias.

New Hampshire—Hon. H. A. Bellows, (Chairman,) Concord; W. A. Sanborn, Weir's.

Vermont—Prof. A. D. Hagar, Proctorsville; Hon. Charles Barrett, Grafton.

Massachusetts—Alfred R. Field, Greenfield; Theodore Lyman, (Secretary,) Brookline.

Connecticut—H. Woodward, Middletown; James Rankin, Old Saybrook.

and sunset of Saturday evening; and further, that no salmon shall be taken before March 15th, 1872; all, however, *on condition* that Massachusetts should impose the same limitations of time. The Commissioners therefore recommend that these restrictions be extended to that part of the Connecticut River lying within the limits of this Commonwealth, provided that the Fish Commissioners be allowed to take all fish needed to re-stock this or any other waters of the Commonwealth.

All of which is respectfully submitted.

THEODORE LYMAN,
ALFRED R. FIELD,
Commissioners.



A P P E N D I X.

[A.]

ARTIFICIAL BREEDING OF TROUT AND SHAD.

The artificial breeding of fishes is, in theory, familiar to most people, but in practice, very little is known of the necessary details.

In France, thanks to the labors of Professor Coste in carrying out the discoveries of Joseph Remy, pisciculture has become a true industry. The Imperial establishment at Huningue, founded fifteen years ago, produced, in 1861, 16,000,000 of eggs. These were of several species, (all, however, of the Salmonidæ,) viz., the Fera, (*coregonus fera*), which is like our white fish; the Ombre chevalier, (*Salmo umbla*), called in the Tyrol, Sälbling, and in England, Charr; the large and valuable Danube salmon, (*salmo hucho*), called Huchen by the Germans; the great trout of the lakes, (*Salmo Trutta*), which is the Seeforelle of the Germans, Truite Saumonée of the French, and sea trout of the English; the common salmon, (*salmo salar*), and the European brook trout, (*Salmo fario*), called Forelle by the Germans. This excellent establishment is (or was) nevertheless defective in two respects; first, in the imperfect means of getting eggs, which are collected at distant points, and consequently arrive often in bad condition; whereas, so extensive and well appointed a place should, in most cases, raise or keep its own breeding fish; secondly, in the small variety of fish cultivated, and those all of one family. All of which is said not to criticize what has been effected, but to point out what may be in future expected. To breed trout successfully there are needed (1,) good and abundant water; (2,) proper apparatus; (3,) a regular supply of breeding fish; (4,) general skill and care in the operation; (5,) plenty of food. The water should be of a spring; pure, clear, and as near 47° the year round as may be. Moreover, it should flow constantly. To avoid the mud and overflow of freshets, the breeding ponds should never be in the main stream. But this should be dammed, (*Pl. III., fig. 2, d*), and from the mill-pond thus made, a canal or a flume (*Pl. III., fig. 2, hh*) should be led to supply the needful water. At the mouth of this canal may be a sluice-gate against freshets, and there must be, also, a barrier to prevent the escape of the fish. (*Pl. III., fig. 2, a c*.) This may be either a water-wheel moving below in a casing (*Pl. II., fig. 6*) and turned by the current, or, if there should be a little fall, a horizontal

raised grating may be placed just under it. (*Pl. II., fig. 4.*) These contrivances are better than a vertical screen, which gets clogged with leaves, &c., and does not permit floating food to pass, which is a very important item. This food consists of an immense variety of organisms, such as larvæ of dragon flies, minute crustacea, water worms and beetles, young fishes, aquatic snails, &c., &c. Its quantity may be increased by placing a slanting boom at the mouth of the canal in such a way as to turn into it whatever the current brings down. (*Pl. III., fig. 2, n.*) The lower part of the canal should be about 4 feet wide and 2 feet deep, and its bottom should be of clean gravel, while the top is loosely covered with boards. (*Pl. III., fig. 2, bb.*)

This is the spawning bed. Beyond comes a pool or a pond (*h. k.*) for breeding-fish, and furnished with a screened outlet (*o.*) Such a pool should be four feet deep, and its bottom weedy or earthy and in no case covered with *gravel*. Other and smaller pools may be provided for the young fish of different sizes, (*m. m.*) each with a good conduit of running water (*e.*) and a screened outlet (*o.*) The hatching house (*Pl. III., fig. 2, l*; *Pl. II., fig. 5*) must also be supplied by a conduit of running water (*Pl. III., fig. 2, e*; *Pl. II., fig. 5, a*) and with a screened outlet (*Pl. III., fig. 2, o.*) This building is a simple close shed with small windows which can be darkened at pleasure. (*Pl. II., fig. 5, e. e. e.*) Within are double ranges of shallow troughs (*c. c. c.*) communicating by little sluice gates (*fig. 3 e*) with a supply trough (*fig. 5, g*; *fig. 2, d*) which, in turn, is filled from the lower end of the conduit (*a.*) outside the building. This lower end is fitted with three flannel strainers (*b. b. b.*) through which the water passes, and then enters the supply trough through a little sluice-gate. (*Fig. 3, c.*) These strainers should be placed at an angle, so as to present much surface, (*Pl. III., fig. 5, a.*) and should be made to slip in and out, so that they may be frequently washed. Moreover, a sluice-gate should always be placed *below* strainers, (*b. c.*) otherwise it gets clogged by leaves, etc. Each spawn-trough (*Pl. II., fig. 3, f*) in the range is 18 inches long by 12 wide, and is separated from its neighbors by a ridge $1\frac{1}{2}$ inches high (*h.*) The sides may be as high as 8 inches, which gives a chance to back up the water, and make a trough of that depth, after the fry hatch. The water furnished to each single range by the sluice-gate, (*e.*) should be equal to an inch stream with a three inch head. The water runs down the range with a gentle current about an inch deep, to secure which, a fall of 1 inch in 6 feet is enough. Hatching-troughs are usually made of wood, with a bottom of half an inch of perfectly clean gravel about the size of peas.

But unquestionably some sort of glazed pottery or coarse glass would be much cleaner, and not liable to the black mould which appears on

wood, (especially where there is a knot,) and which, penetrating the gravel destroys the spawn. In Europe the ova are placed on glass bars, but it would probably suffice to have the bottom of the pottery trough made rough and uneven, so that the ova should be raised, to allow a flow of water under and about them. After flowing the length of the range the water falls through a wide cut in the floor, (*h*.) and passes out under the shed. In addition to the strainers above mentioned, it is well to make one or more piles of gravel in the supply trough, which act as filters. To render the hatching house comfortable in the winter, a stove (*f*) may be placed beyond the troughs. The pools, if four feet deep, twenty-five broad, and forty long, will each contain several thousand breeding fish, weighing from half a pound to a pound and a half. The bottom is left earthy, in order that they may not deposit their spawn on it. As soon as late autumn approaches the trout pair, and seek the congenial gravel of the covered spawning bed. (*Pl. III., fig. 2, b. b.*) Once or twice a day the entrance to the spawning bed is suddenly closed by a bag, the mouth of which is held open by a wooden frame, then the boards are thrown off the trench, and the spawners, seeking to escape into their pool, are caught in the bag, whence they are gently transferred (by untying the bottom,) to a tub of clean water, which is at once taken to the hatching house. In this way none but *ripe fish* are secured, and those in the pool are not bothered by being constantly netted and examined. Each trout is now taken in turn from the tub, and held over a milk-pan half full of pure water. The fish should lie on its back, on the sleeve of the right arm, which should be covered with cotton flannel; the right hand grasps gently but firmly the body just above the tail, the left hand rests below the gills, and near the pectoral fins. (*Pl. III., fig. 3.*) The animal, being thus firmly held, the forefinger of the left hand is passed repeatedly down the belly, with a slow, steady, and moderate pressure, and the ova flowing out fall into the pan of water. The male fish gives out in like manner the seminal fluid, which looks like thick milk. Each fish, after being stript, is quickly put in another tub, and the whole are at last returned to their pool. This operation requires some dexterity, otherwise the fish get bruised, which is liable to produce on them a fatal vegetable growth. They are said to be much more docile in fine weather than in stormy, when they are apt to flap about and hurt themselves. For very large fish, like salmon, it is convenient to have a second man, who holds the tail, giving the other full use of his left hand. It is not necessary to pay attention to the different *pairs* of trout; males and females may be taken indiscriminately, and the product of the whole mixed in a common pan. The water now assumes a milky tinge, from the milt of the male, while the ova sink at once to the bottom, and there *stick fast*.

They appear as little round bodies about three-sixteenths of an inch in diameter, (or larger, if the parent be large,) of a pale yellow or an orange hue, according as the parent has white or pink flesh.* They must be left in the pan as long as they will stick, which will be fifteen or twenty minutes.† Then the water must be gently drained off, fresh water poured in, and this washing repeated once or twice. And here is the golden rule for treating eggs of fishes: never *touch* them, but move them, by *moving the water* in which they lie. The washed eggs are now ready to be spread in the hatching trough, which is done by tilting the pan, and allowing them to slide gradually out, so that they do not lie on top each other, and are not overcrowded. They may be further arranged by agitating the water with a turkey's wing feather. There may be placed about four thousand in each square, which is eighteen by twelve inches. They should be allowed to remain undisturbed, but should be constantly watched, and those which die or are attacked by mould, should be removed with forceps. The minute vegetable growth, so fatal to eggs and even to young fish, is very likely a true *conferva*,‡ at least we may judge so from Vogt's description of the parasitic plant that attacks the eggs of *Coregonus*. To avoid it the precautions are: 1st, pure running water of the right temperature; 2d, very clean gravel washed in boiling water; 3d, the use of wood for troughs, that is well dried, and free from knots and acid juices; 4th, the protection from dust, dirt and sediment; 5th, protection from strong sunlight. Green discovered this by observing that, where a band of sunshine fell from an uncovered window across the troughs, the ova within that limit died. A dead ovum may readily be recognized by its dull opaqueness. It looks like a drop of tallow. Furthermore the troughs should be guaranteed against mice, water-insects and snails. Where sediment chances to settle on the ova the water should be stirred with a feather until the current has carried off the deposit. If spawn is to be sent away, the best time is from twenty to forty days after impregnation, when the eyes show through the eggs as two black specks. Take live moss, with long fine stems, and wash it till perfectly free from dirt. Place a layer of it, while moist, in a tin box with holes in the bottom,

* The color of the flesh plainly does not depend on the crustacean food which the trout gets, according to the theory of Dr. Günther. Trout raised in Green's pools and having the same chance for food of this kind, are sometimes pink and sometimes white fleshed. There is some reason to think this peculiarity is hereditary.

† This *temporary sticking* is an extraordinary provision of nature, to enable the eggs to cling to the bottom, and resist the current, until the parent has had time to cover it by sweeping gravel over it with her tail. It is possible that Vogt was mistaken in supposing the eggs of salmonidæ had no viscous coat; it is perhaps in a soluble form. (Agassiz and Vogt in Poissons d'eau douce.)

‡ See Kützing Fr. R. Phycologia generalis, Plate 11.

place therein a layer of spawn, then another layer of moss, then another of spawn, till the box is full. Put on a tin cover firmly and pack the box with sawdust in another and considerably larger one. If kept cool the spawn will be good for at least fifty days, and it has been thus preserved for eighty-five days. The best temperature is about 50°. At over 65° eggs suffer severely. The minimum time for hatching is fifty days,* the maximum one hundred and fifty days. Then the little troutling lies feebly on its side, and for forty-five days subsists entirely on the gradually absorbed yolk-sac, which in nature seems to serve the double end of food and of an anchor to hold it down among the gravel. At the end of that period the little fish is free, and needs feeding. Now the water should be backed up several inches deep in the troughs, and the fish fed twice a day with raw beef liver cut as fine as jelly and bruised with water, and very slowly given to them so that it may be eaten up clean. It is still necessary to keep the troughs perfectly clean, and to maintain a constant current. At the end of two months feeding the fry may be removed to small pools out of doors, (*Pl. III., fig. 2, m. m.*) and at this, or a subsequent time, may be sent long distances, in a can of water or a tank, (*Pl. III., fig. 6.*)

The successful growth of the fish now depends on (1) plenty of food, (2) proper water of a *sufficient depth*. A little trout kept in a shallow hatching-box, will cease to grow at three or four inches, feed him never so much. Water is to be had in plenty, but *food* is the turning point of profit or no profit in fish breeding. The little ones will get enough food in a proper pond or brook if simply left to themselves; but to grow the larger fish rapidly, extra food in large quantities will be required. The way to get this is the way of Comacchio: to breed one fish to feed another; and to let the first gain its own living from insects or water-plants. Near the sea-coast vast quantities of little fish may be had for the catching; among which may be named the "friars" (*fundulus*) that swarm in salt water ditches and creeks. These scalded and given to trout produce a rapid growth, some getting to half a pound and more in a year. There seems no reason why every inland fish-breeding establishment should not hatch artificially large quantities of small fish entirely as food for the more valuable trout. Probably the cyprinoids ("shiners") would be the best, because they breed rapidly. A certain amount of beef liver could be used to advantage, but would be too dear and too hard to get for a constant food. The shiners would be kept in small ponds, whence the pickerel and pouts had been removed, and where they would get their own living. The breeding establishments already in existence depend for their profits

* Mr. Stone has, however, hatched trout in thirty-five days, in water at 55°.

chiefly on the sale of spawn and young fish. With them this question of food for their breeders is not so important. Besides the ponds of Seth Green, at Mumford; near Rochester, N. Y., there are those of Rev. Livingston Stone, Charlestown, N. H.; Benj. Kilburne, Littleton, N. H.; J. D. Bridgman, Bellows Falls, Vt., and Mr. J. S. Robinson, Meredith, N. H.

But all these, however creditable, so far as they go, are, in comparison with what should be, mere boys' play. A trout-breeding establishment should have five artificial ponds of an acre each, and four feet deep. These would hold 1,000,000 of marketable fish. It should have two or three natural ponds, of a dozen or twenty acres each, where fish could be bred wherewith to feed the trout; and finally, it should have pools for the breeding fish, and hatching-houses in proportion to the quantity to be raised. If other species were cultivated, a proportional number of ponds would be necessary. Salmon for breeding should be treated like trout. They should be taken in nets (from a late run if possible,) and confined in a running stream of some depth, and of a proper bottom, with shady banks, and with hiding-places. From the stream should lead gravelly, covered trenches, suitable for spawning beds, into which the pairs of salmon would go in their season, and whence they could be taken for breeding. The only difference would be that, whereas the trout are kept from year to year, the salmon must be returned to the river in order that they might go to the sea. Seth Green, who sat two days in a tree to watch the salmon spawn, corroborates the account given by Shaw* a quarter of a century ago. The nests, or excavations, are made not with the nose, but with the tail. Many of the ova are neither impregnated nor covered, and are carried down stream where shoals of trout await them. The method of the trout is almost identical. The female lies close to the bottom with her head up stream, and gently fanning with her tail; a few inches above lies her mate, keeping a sharp look out for all intruders, at whom he darts furiously whenever they approach; even the female rushes at them when they are numerous. From time to time she, by a spiral contortion of the body, brings her tail with a strong sweep against the gravel; and this, after a while, makes a rough depression or "nest." Over this she stays and begins a kind of serpentine motion of the body, the object of which seems to be to work the eggs from the ovary into the abdominal cavity. Presently the ova are ejected with a convulsive tremor of the muscles, and simultaneously the male throws the milt into the water. The eggs are covered in part by the current, in part by the tails of the fish; but many are not impregnated at all, and many more are swept down stream, where they are eaten by expectant fish.

* Royal Society, Edinburgh, Vol. XIV., 1840.

The trout themselves, too, come on the spawning beds, and root the gravel with their noses, and then fall back, watching for eggs that may be washed out. Trout, however, will not eat their young, if they can get other food.

It may be noticed that trout are here mentioned as if there were but one species (*salmo fontinalis*) in our ponds and brooks. This may or may not be. Doubtless artificial breeding will throw light on this question before many years have passed. Our trout shows many variations even in neighboring localities. Old John Trout, the veteran angler of Webster's day, could distinguish unfailingly a fish from Monument River, Red Brook, or Marshpee Brook, (all streams emptying near each other on the south side of Cape Cod;) and that not from color, but from shape. The Dublin lake trout of New Hampshire are well known for their peculiar delicacy of form.*

Now it will be the study of intelligent breeders to obtain these different forms, and breed them together; then, to take their progeny and breed *them* together to see if the second generation be fertile among themselves, and to observe all the forms produced by the different interchanges. Well-determined species, too, should be taken; the salmon artificially impregnated by the trout, if this be possible, or the white fish tried with the salmon, in order to determine the limits of inter-fertility. Such experiments might be continued almost indefinitely, and with the greatest advantage to science! Then some of the little land-locked brook trout of Cape Cod should be marked and placed in a situation to seek the sea, if they chose so to do; when retaken, we should find out whether they *did* go to the sea, and whether they proved identical with the sea-trout, so called, which there reach a weight of 3 lbs. or 3½ lbs. These sea-trout come up into the brooks in the middle of May, spawn in October, and return lean in November to the sea, where they recuperate; for they are fat in winter, though not highly flavored. They go well out, as is plain from the fact that they are occasionally taken several miles from any stream or harbor. The little yellowish "natives" remain in fresh water; but these may be only the parr form of the same species.

Artificial Breeding of Shad.—Early in last summer, Seth Green offered to come, at his own expense, and try to hatch the eggs of the shad at Holyoke, provided the New England Commissioners would furnish the necessary apparatus. This man bids fair to prove the Remy of

* As to color, it counts for little; and it is commonly known that it varies according to the hue of the bottom. It is *not* commonly known, however, that the trout changes its tint almost like the chameleon. A fish from a white gravel going suddenly over dark weeds, for a few moments stands out as a light spot against an obscure ground, but soon it shades off, and in perhaps two minutes, is similar to the new bottom over which it lies.

this country, not because he has succeeded in hatching a certain number of trout, but because he has originality, as well as skill, and large ideas, as well as originality. He has a living faith that our rivers, ponds and bays may, by artificial breeding, be so filled with fish, that, to use his own words, "the people can't catch 'em out if they try." With more truth than fancy, he says, "let your State spend a tenth part in planting fish, of what it spends in planting corn, (that don't pay for the raising,) and every poor man may have a fish dinner the year round." The newspapers and periodicals have spoken of him, only to say that he is a noted sportsman. To be a crack shot, and to throw a fly eighty feet, are things of no great matter, but to increase and cheapen the food of a whole people, is worthy the devotion of a lifetime.

Green began his experiments the first week in July. He put up some hatching troughs, like those already described, (*Plate II., figs. 3 and 5,*) in a brook which emptied into the river. Having taken the ripe fish with a sweep-seine, he removed and impregnated the ova in the way already described for trout. These, to the number of some millions, he spread in boxes; but, to his great mortification, every one of them spoiled. Nothing daunted, he examined the temperature of the brook, and found, not only that it was 13° below that of the river (62° to 75° .) but that it varied 12° from night to day. This gave the clew to success. Taking a rough box, he knocked the bottom and part of the ends out, and replaced them by a wire gauze. In this box the eggs were laid, and it was anchored near shore, exposed to a gentle current that passed freely through the gauze, while eels or fish were kept off. To his great joy, the minute embryos were hatched at the end of sixty hours, and swam about the box, like the larvæ of mosquitoes in a cask of stagnant water. Still, though the condition of success was found, the contrivance was still imperfect; for the eggs were drifted by the current into the lower end of the box, and heaped up, whereby many were spoiled for lack of fresh water and motion. The best that this box would do, was ninety per cent., while often it would hatch only seventy or eighty per cent.

The spawn box he at last hit on, is as simple as ingenious. It is merely a box with a wire gauze bottom, and steadied in the water by two float-bars, screwed to its sides. (*Pl. II., figs. 1, 2, 7.*) These float-bars are attached, not *parallel* to the top line of the box, but at an *angle* to it, which makes the box float with one end tilted up, and the current striking the gauze bottom at an angle, is deflected upwards, and makes such a boiling within, as keeps the light shad eggs constantly free and buoyed up. The result was a triumph. Out of 10,000 ova placed in this contrivance, all but seven hatched! In spite of these delays, and of the imperfect means at hand for taking the fish, Green succeeded in hatching and setting free in the river, many millions of these tiny fry.

As no way is now known of keeping shad in ponds or pools, they must be watched at their breeding grounds, and when the spawn begins to flow freely from them, operations may commence. The fishing must take place by night, because (near Hadley Falls, at any rate,) no ripe females are captured by day; those taken are all spent, or not yet ready to lay. This may be because they are in the deep holes, spawning, or because they are above, in the quick water. The seine must not be hauled quite ashore, but the bight of it must remain in the shallow water, that the fish may be kept alive. Thence they are taken out, and the spawn impregnated in a tub, or a large pan of water. Many scales will fall in the water, and must be carefully picked out, before the ova are distributed in the floating boxes, wherein they may lie about one-fourth of an inch deep. The boxes must be lashed end to end, in lines of convenient length, and it is well to surround them with a log boom, to keep off rubbish brought down by the stream. They should be placed conveniently near the shore, in a gentle current, but not so near as to risk being left dry by a fall of the river. They will now appear as if they had nothing in them, for the eggs are almost as transparent as the water itself; but if they turn milky, and look like half-boiled sago, they are spoiled.

The contents are not, however, to be thrown away, without taking up some in the hand, when it will likely appear that but a small part are addled, while the rest remain transparent. With further progress the embryo may, with a weak glass, be easily seen moving in the egg, which then is not so clear, and at the end of sixty hours (with sunshine and water at 75°,) the box will be found alive with tiny fry, almost transparent, except the eyes, swimming freely, with their heads up stream. In confinement they cannot be kept, because the yolk-sac does not suffice for their support for more than one or two days. But care must be taken to liberate them in a *safe place*. Green observed that, on setting them free among the shallows near shore, the dace (*Argyreus*) and other little fishes rushed to the spot, and commenced jumping at them. In the stomach of a dace, he found fourteen shad fry. Then, by a series of most ingenious experiments, he discovered that the fry, so far from frequenting the shallows, like many minnows, *made directly for the main current in mid river*. How different this from the young trouts that lie almost helpless for forty-five days, and then are fain to hide behind stones and roots! Whereas, these minute, transparent, gelatinous things push boldly for the deep, swift current, where they are too insignificant to be attacked by the great fishes. Will the physicists tell us what "correlation and conservation of force" produces this? or will the Darwinians set forth how, some millions of years gone, a particular shad fry, finding by accident that he did not get eaten in deep water,

transmitted a deep-water instinct to his children, who thereby flourished, while the shoal-water fry got in due time exterminated! *

So the fry must be let go in the proper way by towing the boxes into mid stream, or by liberating them during the night, when their enemies do not feed. In either case, the trap-slide (*Pl. II., fig. 2, d.,*) must be raised, when they will be carried gradually through the coarse netting by the current. This operation must be performed as soon as all the ova are hatched out. There ends the nursery care; for we know no method of keeping the young till they have gained size and strength. What we may hope to avoid is, the enormous loss which the eggs themselves suffer, when deposited by the natural method.†

The ovaries of a full-grown shad (*Alosa praestabilis*) weigh at the spawning season about thirteen ounces, without the membranes. With a common lens, three sizes of ova are at once distinguished. The first have a diameter of $\frac{8}{100}$ to $\frac{3}{100}$ of an inch. These are transparent, and ready to be laid; the second, $\frac{4}{100}$ to $\frac{5}{100}$ of an inch; the third, $\frac{2}{100}$ of an inch. These two smaller sizes are opaque; they are still found after the fish has spawned, and are the crops ready to mature the next year and the year after. This state of the ovary ‡ has its parallel in the turtle, and possibly in all of the vertebrata.

It is scarcely necessary to add that the microscope shows other and smaller ovarian eggs. An ovary of the size above mentioned contains about 70,000 ova, ready to be laid. Their diameter increases, as soon as they are put in water and impregnated, from $\frac{2}{100}$ to $\frac{3}{100}$ of an inch. This is by the endosmosis of water between the yolk and the shell membrane.§ Of the embryonic development, we have, as yet, only an imperfect outline to present. Forty-one hours after impregnation, the condition of the embryo is, on the whole, in advance of that of *coregonus* on the thirty-third day. || The under surface, from the nose to the beginning of the ventral, is in close contact with the yolk, which is composed of a great number of rounded divisions, such as are seen in the complete segmentation of that body, while its surface is flecked with pigment stars, (*Pl. I., fig. 1, d.,*) of which a less number may be distinguished on the forward part of the trunk. That part of the embryo which swings

* Did it ever occur to anybody that the Darwinian hypothesis was, after all, suggested by Lamb's "Origin of Roast Pig?"

† With the utmost care to secure every favorable surrounding, Green was never able to hatch more than *two per cent.* on the natural river bed. Only those eggs hatched that chanced to catch in an angle of the gravel, where they had the current all about them. This does not take into the account those that are not impregnated, or are devoured, or covered by mud, &c., &c.

‡ Agassiz, L., Contrib. to Nat. Hist. of U. S., Vol. II. p. 489.

§ The same takes place in a less degree in the egg of *Coregonus* (white fish.) (Carl Vogt, loc. cit. p. 27, Pl. I. fig. 9.) Accustomed only to eggs of trout, Green was much astonished to behold the mass of ova swell to near twice its first bulk.

|| Vogt, loc. cit. Pl. 6, fig. 142.

free makes a spiral half turn, so that the dorsal fin is turned toward, instead of from, the yolk-sac. The head, which is pointed in front, and flattened, bears no resemblance to that of the grown animal, and it would be perhaps fanciful to compare it even to such forms as *Petromyzon* (Lamprey eel.) A large portion of it is occupied by the eye, which fills proportionately at least four times more space than in the adult, (*figs. 1, 2, 3, b.*) The choroid coat, not yet closed below, partly encircles the crystalline lens, above which may be distinguished a clear space, which is a portion of the vitreous humor. The form of the brain may already be distinguished, especially when fore-shortened from the front, (*fig. 3, a.*) It is probable that the pectoral fin already exists, but, from the extreme transparency of the tissues, its outline could not be caught. From the well-marked nuchal bow, (*fig. 1, n.*) the flattened body tapers gradually to a fine point, and is bordered, above and below, by an embryonic dorsal and ventral (*fig. 1, e, g.*) which spread into a spatula-like caudal fin (*fig. 1, f.*) and it should be observed, that neither in this stage nor in the newly-hatched, (*fig. 4, e, f, g.*) does there exist any unevenness of the margins of these fins, that should indicate their approaching separation; whereas, the newly-hatched salmon (*Pl. III., fig. 1, b, c, d, e, f.*) already shows very distinct dorsal, adipose, caudal, anal and ventral fins; and the little *Coregonus*, though less advanced in this respect, shows plainly the boundaries of these organs. Near the base of the caudal is now to be seen the end of the alimentary canal, passing at an angle across the breadth of the fin. (*Pl. I., fig. 1, h.*) The heart may be observed beating, and the embryo itself moves itself round and round within its prison, by a series of convulsive jerks. This motion is called by the breeders, "life in the egg." *

The specific gravity of the eggs at all stages is very small—barely enough to sink them, in still water,—a great contrast to those of the trout, which go down almost like shot.

The newly-hatched young is $\frac{37}{100}$ of an inch long, (*figs. 4, 5.*) It swims actively by a continuous and rapid vibration of the body, and keeps its head to the current, perhaps to get the food that is carried past.† The yolk-sac, whose longer diameter, already in the egg, was parallel with the body, now appears still more ovoid in form, (*fig. 4, d.*) The pectoral fin (*fig. 4, k.*) is easily seen, and the finger-like canals in it indicate that its rays are forming. The embryonic, dorsal, caudal and ventral fins are continuous one with another, and extend round the

* In this stage Green succeeded in keeping eggs alive in damp moss for six days, in a low temperature. But they are very hard to transport long distances, and cannot be hatched in cold water.

† The current carries the fry gradually seaward. Hence it is, that since the erection of the Holyoke dam, young shad are no more seen there; because, by the time they are large enough to be noticed, they have all drifted lower down the river.

whole body, back of the yolk-sac. In the caudal a few faint, radiating fibres indicate the formation of rays. The choroid has completed its circle, (*fig. 4, b,*) and the eye has nearly the outward look of that in the adult. Along the course of the alimentary canal, quite to the anal opening, (*fig. 4, h,*) and over the yolk-sac, the pigment stars are more numerous and defined. A little indentation indicates the mouth, which lies under the eye, and opens as a curved slit. (*Fig. 5, c. Compare that of the salmon, Pl. III., fig. 1.*) The general mass of the brain (*Pl. I., fig. 4, a,*) is easily made out. Along the centre of the body, a more translucent stripe indicates the dorsal cord, (*fig. 4, o,*) above which the range of muscular bundles begins to be distinct (*fig. 4, m.*)

Within eighty-two hours after hatching, (*figs. 6, 7,*) great development has taken place. The tail, though not forked, has taken on its triangular form, and is made up of fine, radiating fibres (*fig. 6, f.*) The embryonic dorsal and ventral (*fig. 6, e, g,*) are reduced in breadth, whereby the annal opening (*fig. 6, h,*) is brought close to the body, and at the point *l* (*fig. 6,*) may be seen the base muscles of the true dorsal beginning to form. Along the body the transverse muscles (*fig. 6, m,*) show themselves distinctly both above and below the lateral line. The pectoral fins (*fig. 7, k,*) have now their fibres complete, and resemble two little flat brushes. The mouth (*fig. 7, c,*) is pushing forward towards its normal place. It seems to have, in the under lip, a notch, perhaps the point of future union of the maxillaries. The yolk-sac (*fig. 7, d,*) no longer plays an important part, and is reduced to very small dimensions. But the most striking change is the development of gills, four on a side, and each in its gill-pouch (*fig. 7, i, i, i, i.*) The gills themselves can be distinguished, like little bows, along which run their veins and arteries. These, together with the size and position of the eyes, give the under surface of the head, rather the look of that of a skate embryo than of a shad.

Such is a hasty sketch of three periods of embryonic life in this *Alosa*. Of the young, at three months, outlines have already been given.* It should be added, that their jaws are, at this age, armed with fine, sharp, slightly curved teeth, nearly continuous along the upper maxillary and intermaxillary pieces, with a few at the point of the lower maxillaries. None, apparently, on the vomer. These are necessary for the capture of the water beetles that then constitute a part of their food. The jaws of the adult are, as is well known, smooth.†

* Report for 1866. Plate, figs. 1, 2, 3.

† This brings to mind the eternal "white-bait" controversy has recently come up in England, in its usual crude form. The fish is a small clupeoid that comes in shoals, at certain seasons, into the Thames and some other English rivers; and, when fried, furnishes a poor excuse for good wine. Periodically, there is somebody who begins to wonder what the white-bait really is. So, in the "Pall Mall Gazette;" of October 29th,

Of the further growth of the shad, we cannot as yet speak with certainty, although there are pretty good grounds for an opinion. Mr. Frederic Russell, late commissioner from Connecticut, first called attention to some small *Alosæ*, about nine inches long, called by the fishermen, "chicken shad," or "Connecticut river alewives." He was led to consider them partly grown fishes, from the fact that they all were males. Of many hundreds examined, only one female could be found, and there the ova were not developed. The fish taken for artificial breeding, at Holyoke, were then compared, and it was found that they were of three, if not of four distinct sets or sizes. The smallest were the "chicken shad," and were all males;* the next were but half the size of the largest, and were males and females; so also were the largest of all. Hence we may at least guess, that the young of the autumn go down, as minnows of four inches, to the sea. The next spring the males are fecund, (so, too, in the salmon parr,) and seek the fresh water, urged by the sexual instinct, and are the chicken shad or yearlings. Not so the females, which, not yet sexually developed, remain in the salt water or in the estuaries. When two years old both sexes are fecund and seek the river together. These are the half-grown or two-year-olds. The third season they are large fish, and may be termed three-year-olds. But these three-year-olds have, in the ovary, at least two crops of eggs ready, though undeveloped, for the next two seasons. Nature does not prepare her seed only to die! Old fish become barren.† These two crops of eggs are to be laid, and for that the fish must live at least two years more. The impression that prevails among fishermen, both here and in Europe, that shad die after spawning, the first year, comes only from the familiar fact that fishes are in meagre condition after spawning, and that some of the weaker probably do die, and are seen floating. There was a similar idea about lamprey eels, which was to the effect that they made fast by their sucker and then slowly decayed.

Mr. Francis Francis comes out with a column and a half of fine print, to say, that he once caught some little fishes, that to his mind, were young herring; and that they looked, according to his memory, a good deal like white-bait. *Ergo*, white-bait are young herring! He is followed by two or three other correspondents with equally important remarks. Now it may be that white-bait are young herring, but Mr. Francis does not prove it. Therefore, we must be content with Valenciennes, (Cuvier et Valenciennes Hist. Nat. des Poissons, vol. xx. pp. 30 and 341, 1847,) who, thirty years ago, declared that the white-bait was not only not a young herring, (*Clupea herengus*,) but was even of a different genus, (*Rogenia alba*.) And, as he was one of the best European ichthyologists, and as he devoted two hundred and twelve pages to the detailed consideration of the former fish, his authority ought to stand, until somebody has examined the question as carefully as he.

* This sexual peculiarity is well known also to some of the Merrimack fishermen. Consult von Siebold. Süßwasserfische.

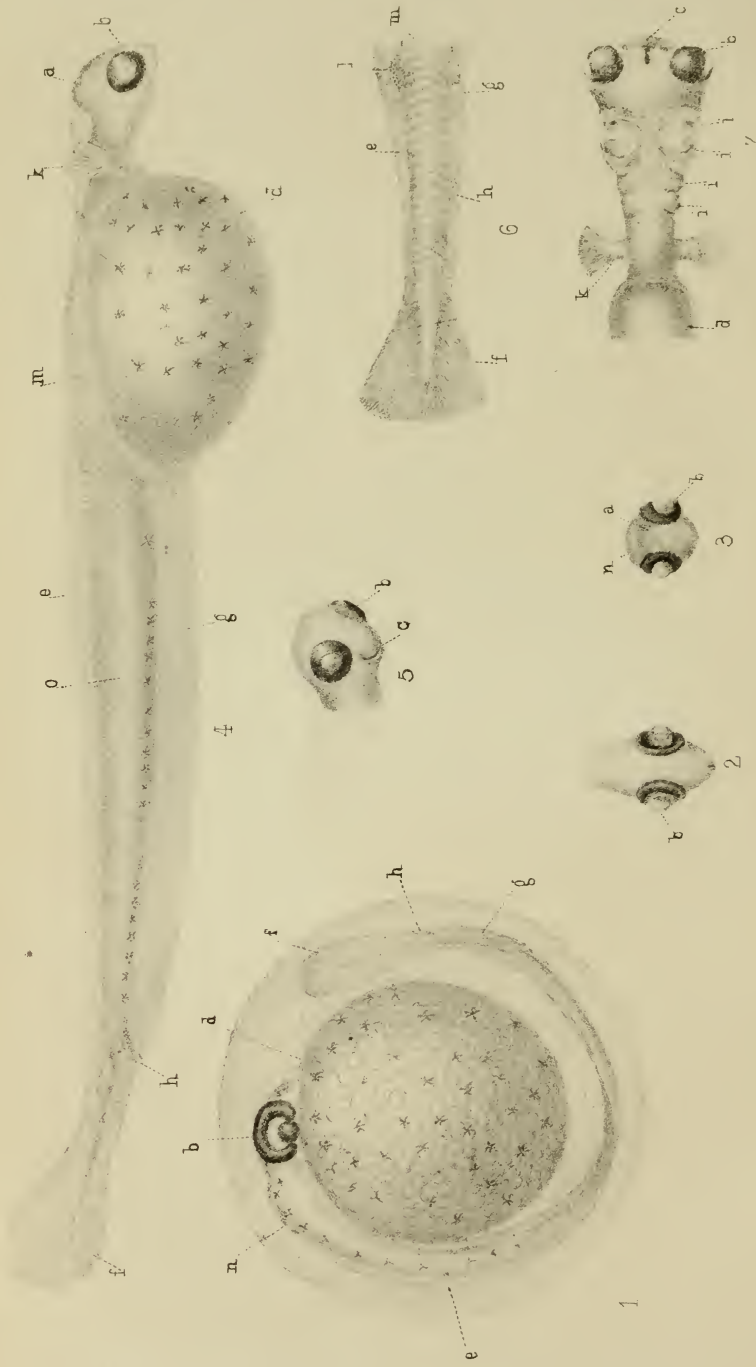


Fig. 1.



Fig. 2.

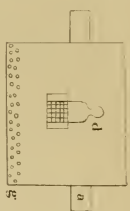


Fig. 7.

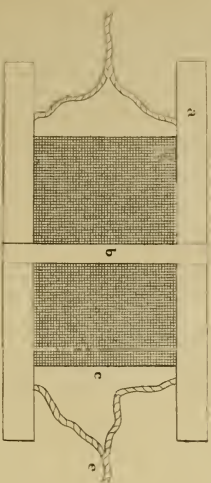


Fig. 3.

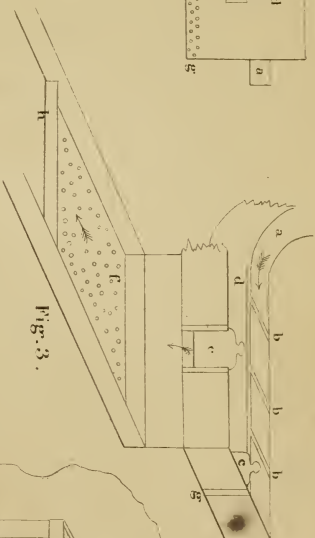


Fig. 4.

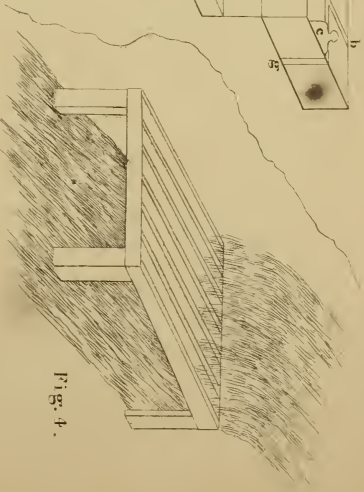


Fig. 5.

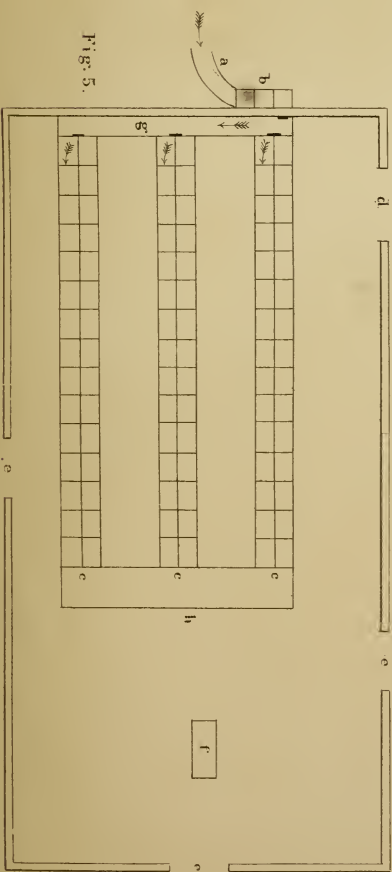
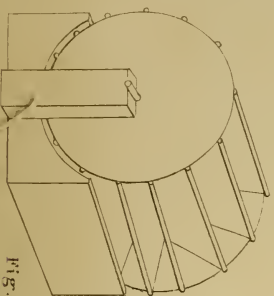


Fig. 6.





EXPLANATION OF PLATES.

PLATE I.—*Embryos of the Shad.*

a, brain; *b*, eye; *c*, mouth; *d*, yolk-sac; *e*, embryonic dorsal fin; *f*, caudal; *g*, embryonic ventral; *h*, anal opening; *i*, *i*, *i*, gills; *k*, pectoral fin; *l*, muscles of the dorsal fin; *m*, transverse muscles of the body; *n*, nuchal bow; *o*, dorsal cord.

FIG. 1.—Embryo, 41 hours old, in the egg; from life.

FIG. 2.—Head of the same from above.

FIG. 3.—Head of the same from the front.

FIG. 4.—Embryo, just hatched; from life.

FIG. 5.—Head of the same, seen diagonally.

FIG. 6.—Tail and hind body of a young fish 82 hours after hatching. Alcoholic.

FIG. 7.—Head of the same from below. All the figures are enlarged 17 diameters.

PLATE II.

FIGS. 1, 2, 7.—Green's patent hatching box seen from the side, end and bottom. Scale, 1-20th. *a*, side floats, 3.4" long; 2" by 3" square, set with screws. *b*, bottom cross-bar, bevelled, to throw the current upward. *c*, wire-net bottom, 14 wires to an inch. *d*, trap in hind end for escape of young fish, covered by wire-net, 8 to an inch, and with a covering slide. *e*, anchoring cord. *f*, water-line. *g*, spawn.

FIG. 3.—Upper part of a hatching-trough. The water comes by a conduit, *a*, through strainers, *b*, *b*, (*see Pl. III., Fig. 5, a*,) by a sluice, *c*, to the supply trough, *d*, whence it is fed by a sluice, *e*, to the hatching-trough, *f*. *g*, wall of hatching-house. *h*, cross-bar separating two squares. (*See Fig. 5, c*.)

FIG. 4.—Horizontal screen, to stop trout from passing up a fall.

FIG. 5.—Plan of a hatching-house. Scale, 1-120th. *a*, water conduit. *b*, strainers. *c*, hatching-troughs. *d*, door. *e*, *e*, windows. *f*, stove. *g*, supply trough. *h*, space cut out of floor for escape of water.

FIG. 6.—A current wheel, to stop fish from running up stream; while, like Fig. 4, it allows the passage of floating food.

PLATE III.

FIG. 1.—Young salmon just hatched, (enlarged from Agassiz's *Poissons d'eau douce*, Pl. 7, Fig. 170.) *a*, pectoral fin. *b*, dorsal. *c*, adipose. *d*, caudal. *e*, anal. *f*, ventral. *g*, yolk-sac.

FIG. 2.—Trout ponds and breeding apparatus. *a*, grating. (*See Plate II., Fig. 4.*) *b, b*, spawning beds. *c*, current wheel. (*See Plate II., Fig. 6.*) *d*, dam to make a supply pond. *e, e, e*, water conduits. *f*, strainers. *g*, house. *h, h*, streams to fish pools. *k, k*, fish pools. *l*, hatching-house. *m, m*, pools for young. *n*, booms to direct floating food to the ponds. *o, o*, outlets.

FIG. 3.—Position of fish in taking the spawn.

FIG. 4.—Section, to show details of Foster's fishway. *a, a*, side timbers, 4'' by 7''. *b*, plank floor. *c*, 10-inch spikes driven from timber to timber, and into the sill, *d*, which is 5'' by 6''. *e, e*, bulk heads. *f, f*, openings for water. *g, g*, outer planking of two-inch plank nailed with six-inch spikes.

FIG. 5.—Section of a trough, with a screen, *a*. *b*, gate. *c*, sluice-way.

FIG. 6.—Tank, to transport live fish, with a pump to aerate the water. Within, at the point, *a*, may be a basket for ice.

The most important details, both in text and plates, about trout breeding, have been taken from the establishment of Seth Green.

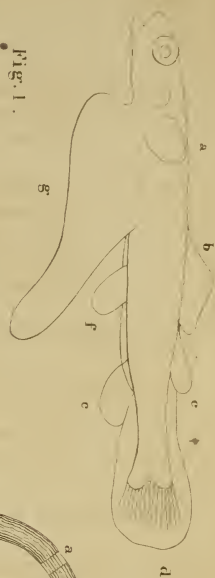


Fig. 1.



Fig. 3.

Fig. 6.

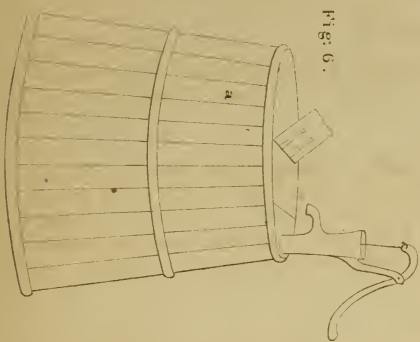


Fig. 2.

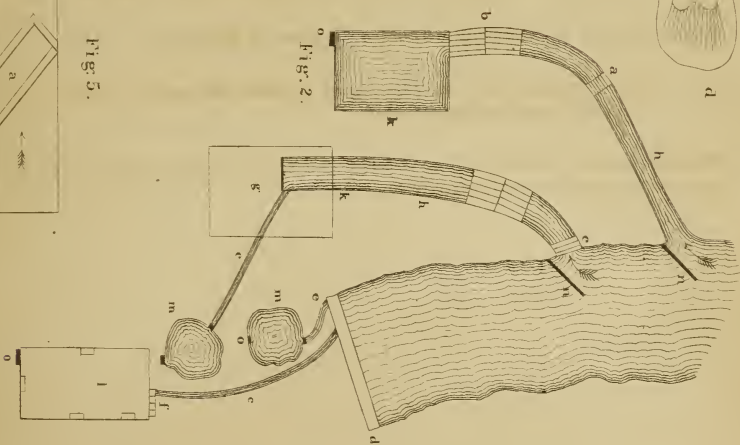


Fig. 5.

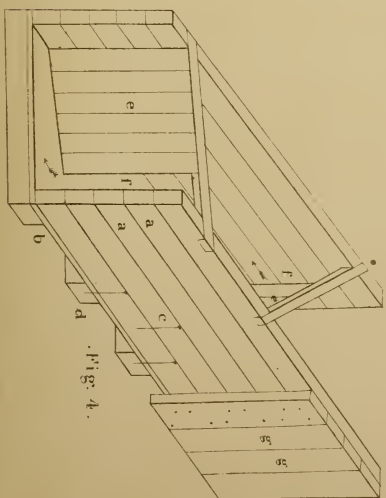
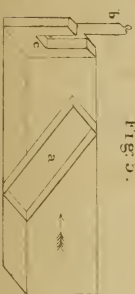


Fig. 4.

[B.]

LEGISLATION.

By the law of this Commonwealth, all persons who may build dams on streams annually frequented by fish, do so under an obligation to keep open sufficient fish-ways for the passage of such fish ; unless they are relieved by a special Act of the legislature.

The following is the legislation which concerns this Report more particularly.

[CHAP. 62.]

AN ACT to protect the Shad Fishery in the Connecticut River.

Be it enacted, &c., as follows :

SECT. 1. No person shall set, draw or sweep any seine or net, the meshes of which are less than two and one-fourth inches square when new and dry, for the purpose of catching shad or any other fish in that part of the Connecticut river which is within the limits of this Commonwealth, and below the dam across said river at Holyoke, between the first day of May, and the fifteenth day of July, during each year.

SECT. 2. Every person violating the provisions of the preceding section, shall be liable to a fine of not less than ten nor more than fifty dollars for each offence, to be recovered in any court competent to try the same ; one-half of said fine to inure to the use of the town in which the offence shall be committed, and the other half to the person who shall prosecute therefor.

SECT. 3. This act shall take effect upon its passage. [*Approved March 2, 1864.*]

[CHAP. 238.]

AN ACT concerning the Obstructions to the passage of Fish in the Connecticut and Merrimack Rivers.

Be it enacted, &c., as follows :

SECT. 1. The governor, by and with the advice and consent of the council, is hereby authorized to appoint two persons to be commissioners of fisheries in the Merrimack and Connecticut rivers, who shall hold said office for the term of five years, unless sooner removed therefrom. And in case of any vacancy in said board, the governor shall have power to fill the same.

SECT. 2. Said commissioners shall forthwith examine the several dams on said rivers in this Commonwealth, and shall, after notice to the owners of said dams, determine and define the mode and plan upon which fish-ways shall be constructed suitable and sufficient in their opinion to secure the free passage of salmon and shad up said rivers during their accustomed seasons.

SECT. 3. It shall be the duty of the commissioners appointed under this act, when they shall have determined upon the method and plan for such fish-ways, to submit a full and specific statement and description of the same to any board of commissioners empowered to act by the State of New Hampshire, upon the same or similar subjects, for their approval.

SECT. 4. If any plan so submitted shall be approved by the said commissioners for the State of New Hampshire, the commissioners under this act shall forthwith upon such approval being expressed, furnish a copy of the plan adopted for each dam to the proprietors thereof, and shall file a copy of each of such plans in the office of the secretary of the Commonwealth, with an affidavit of the fact that the same has been furnished to said proprietors, which affidavit shall be full proof of the facts therein stated.

SECT. 5. If the several proprietors of said dams shall consent to construct said fish-ways according to the several plans adopted for their respective dams, at their own expense, the commissioners under this act may agree with the proprietors of the several dams so to do. And when the same shall have been constructed within such reasonable time as said commissioners shall prescribe, and according to said plans, with such minor variations therein as said commissioners shall approve, the said commissioners shall certify said construction to the secretary of Commonwealth, and the same shall for the period of five years from the passage of this act be taken and deemed as in lieu of the fish-ways, which said proprietors respectively are now required by law to keep and maintain over, at or around their respective dams. But said proprietors respectively shall be required to keep said fish-ways on their respective dams in good repair, and to maintain the same for the period of five years from the passage of this act to the satisfaction of said commissioners; and during the period of said five years the liability of said proprietors respectively to build and maintain the fish-ways now by law required of them shall be suspended.

SECT. 6. When said fish-ways shall have been constructed as aforesaid, the commissioners under this act shall prescribe in writing the times when the same shall be kept open and unobstructed, with power to change such times as they may deem judicious. And a copy of such prescriptions shall be served on each of such proprietors, and the certificate of said commissioners of the manner in which the same has been served shall be full proof of the fact.

SECT. 7. If any proprietor of any dam shall refuse or neglect, for the period of thirty days from the time said commissioners shall have furnished said proprietor with the plan, as herein before provided, to agree with said commissioners for the building at, over or around his dam of the fish-way prescribed by the plan furnished such proprietor by said commissioners, then said commissioners shall be authorized to contract in behalf of this Commonwealth for the construction of the fish-way at, over or around the dam of said proprietor so refusing or neglecting. And said commissioners shall thereupon cause such fish-way to be constructed with all reasonable despatch. And the expense thereof shall be a charge against the owner of such dam, and the same may be recovered of said proprietor in an action of contract in the name of the Commonwealth, with costs and twelve per cent. interest on.

the amount of such expense from the time when the same shall have been demanded of such proprietor by said commissioners.

SECT. 8. Whenever, in the construction of any such fish-way, the property of any person not liable by law to provide a suitable and sufficient fish-way at, over or around such person's dam, shall be taken for the purpose of such fish-way, the said commissioners shall, upon the application in writing of the person aggrieved, assess a reasonable compensation therefor, to be paid by the Commonwealth. And any person aggrieved by such assessment shall have the right to have such compensation determined by a jury, in the manner provided by the General Statutes for the assessment of damage occasioned by the laying out of highways.

SECT. 9. Said commissioners shall have power to contract with the proprietor of any dam on either of said rivers, for the suspension for five years from the passage of this act of the liability of said proprietor to construct at his own expense any fish-way at, over or around his said dam, upon the payment by said proprietor to the treasurer of the Commonwealth of such a sum of money as said commissioners shall deem reasonable, and a copy of any such contract, attested by said commissioners, shall be filed in the office of the secretary of the Commonwealth.

SECT. 10. Said commissioners shall have power to contract with the Essex Company for the construction of the fish-way prescribed by said commissioners over the dam of said company, at Lawrence, by said company, at an expense to the Commonwealth not exceeding seven thousand dollars, the said Essex Company to pay the expense of such building over and above the said amount so to be paid by the Commonwealth.

SECT. 11. The compensation of each of said commissioners shall be determined by the governor and council.

SECT. 12. The commissioners appointed under this act shall have power to construct, or to contract for the construction of, such appliances and structures as they may think essential or useful for the passage of the fish herein named up and down said rivers, and for their protection in such passage.

SECT. 13. Said commissioners may in their discretion delay the definite construction of fish-ways on the Connecticut river, until they shall be satisfied that such legislation has been adopted by the State of Connecticut as shall in their opinion be necessary to secure the free passage of the fish above named through the part of said river running through said State of Connecticut.

SECT. 14. There shall be appropriated and paid from the treasury of the Commonwealth a sum not exceeding seven thousand dollars, to defray the expenses of the commissioners herein created and of constructing the fish-ways herein provided for.

SECT. 15. Any person who shall neglect or refuse to keep open or maintain any fish-way at the times prescribed by the commissioners under this act, shall forfeit the sum of fifty dollars for each day's neglect or refusal so to keep open or maintain said fish-ways, to be recovered by indictment in the county where said dam or a part thereof, is situated, one-half thereof to the use of the complainant and the other half to the use of the Commonwealth.

SECT. 16. This act shall take effect upon its passage. [*Approved May 15, 1866.*]

[CHAP. 249.]

AN ACT for the protection of Trout and Black Bass.

Be it enacted, &c., as follows :

SECT. 1. Whoever takes or catches any trout in any rivers, streams or ponds, between the twentieth day of September and the twentieth day of March, or within the time aforesaid sells, buys or has in his possession any trout so taken within this state, shall forfeit one dollar for each trout so caught or taken, sold, bought or had in possession.

SECT. 2. Whoever shall take or catch any fish called black bass in any of the ponds within the limits of this Commonwealth, from the first day of December to the first day of June, or at any time, except with hook and line, shall forfeit a sum not less than two nor more than twenty dollars for each offence, to be recovered by prosecution before any court competent to try the same.*

SECT. 3. In all prosecutions for forfeitures under the provisions of this act, the fact of sale, purchase or possession shall be evidence that the trout or black bass so sold, purchased or had in possession, were taken within this state. [Approved May 22, 1866.]

[CHAP. 187.]

AN ACT to authorize Towns and Cities to establish Herring Fisheries.

Be it enacted, &c., as follows :

SECT. 1. The mayor and aldermen of any city, and the selectmen of any town, in this Commonwealth, are hereby empowered to authorize, in writing, any three or more persons and their associates, to organize a corporation, with a capital stock of not less than one thousand, and not more than five thousand dollars, for the purpose of opening outlets, canals or ditches, for the introduction and propagation of herrings and alewives, in the ponds, creeks and rivers within the limits of such town or city, as aforesaid ; and said corporation, when organized, shall have all the powers and privileges, and be subject to all the duties, liabilities and restrictions, set forth in the sixty-first chapter of the General Statutes, and in all general laws which now are or may hereafter be in force relating to corporations.

SECT. 2. Said corporations may purchase and hold real estate necessary for the purpose of opening outlets, canals, sluiceways or ditches, for the passage of herring and alewives to and from said ponds and other waters.

SECT. 3. Towns and cities, in their corporate capacity, may open ditches, sluiceways or canals, into any ponds within their limits, for the introduction and propagation of herrings and alewives, and for the creation of fishery for the same ; and the land for opening such ditches, sluiceways or canals, within such town or city, may be taken under the provisions of the statutes which now regulate and limit the taking of land for highways and other purposes.

SECT. 4. Any fishery so created by any town or city shall be deemed to be the property of such town or city, and such town or city may make any proper regulations concerning the same, and may lease such fishery for a period not exceeding five years, upon such terms as may be agreed upon between such town or city and the lessees of the same. And any town may lease for a

* Repetition of Chap. 59, Laws, 1862.

like period, and upon like terms, any fishery now owned by such town, or any public fishery which has heretofore been regulated and controlled by such town.

SECT. 5. No person without the permission of such town or city, or of the lessees of such fishery in any fishery created by such town or city, or in any fishery created by any corporation, without the permission of said corporation, shall take, kill or haul on shore any herrings or alewives, in any fishery so created by any town, city or corporation, for the introduction and propagation of herrings or alewives.

SECT. 6. Whoever violates any of the provisions of the preceding section, shall forfeit and pay a sum not less than five nor more than fifty dollars for each offence, to be recovered by prosecution before any court competent to try the same.

SECT. 7. All prosecutions under the preceding section shall be instituted within thirty days from the time the offence was committed.

SECT. 8. Nothing contained in this act shall be held to impair the rights of any person under any law heretofore passed, or to deprive any person of any right under any contract now existing, or to authorize any town, city or corporation to enter upon or build any canals or sluiceways into any pond which is the private property of any individual or corporation.

SECT. 9. This act shall take effect upon its passage. [*Approved April 25, 1866.*]

In this Act the word *herring* ought to be used (if at all) as identical with *alewife*, which fish is wrongly called herring in some places. But the true herring is an open sea and bay fish, and does not frequent fresh water.

[CHAP. 344.]

AN ACT to regulate Fisheries.

Be it enacted, &c., as follows:

SECT. 1. The commissioners of fisheries appointed under chapter two hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six, in addition to their powers and duties under said act, are hereby authorized to examine all the dams upon rivers in this Commonwealth over and around which the proprietors are now required by law to keep and maintain fish-ways, and said commissioners shall determine whether said fish-ways are suitable and sufficient for the passage of such fish as are found in said rivers; and if, after inspection, the said commissioners shall find said fish-ways are unsuitable or insufficient for the passage of fish, or are out of repair, or are not kept open at suitable times, they shall give notice to the proprietors of said dams of any defect in their fish-ways, or that the fish-ways are not kept open the proper time. And said commissioners shall further, in writing, prescribe the times for keeping open and unobstructed said fish-ways, and what repairs may be necessary, and what changes, if any, should be made for improving said fish-ways.

SECT. 2. Any person or corporation who shall neglect or refuse to keep open or maintain any fish-way at the times prescribed by the commissioners

under this act, shall forfeit the sum of fifty dollars for each day's neglect or refusal so to keep open or maintain said fish-way, to be recovered by indictment in the county, where said dam, or any part thereof, is situated, one-half to the use of the complainant and the other half to the use of the Commonwealth.

SECT. 3. There shall be appropriated and paid out of the treasury of the Commonwealth a sum not exceeding ten thousand dollars, to defray the expenses of the commissioners, first, in restocking the rivers of Massachusetts with shad, salmon and alewives; second, in restocking the ponds in this Commonwealth, for the purpose of propagating black bass and other fish. [*Approved June 1, 1867.*]

[CHAP. 289]

AN ACT to regulate Fishing in Merrimack River, and for other purposes.
Be it enacted, &c., as follows:

SECT. 1. No person shall fish with a seine in Merrimack river, nor in any manner take or catch shad, salmon or alewives in said river, until the fifteenth day of April, in the year eighteen hundred and seventy-one, under penalty of the forfeiture of the seine and of five dollars for each shad or alewife and fifty dollars for each salmon taken: *provided*, that the fish commissioners shall be allowed from time to time to take such fish as may be required to re-stock the Merrimack or any other rivers.

SECT. 2. No person shall fish within four hundred yards of any fish-way on Merrimack river, nor trespass within the limits of the same, under a penalty of fifty dollars.

SECT. 3. The fish commissioners are hereby empowered to cause any tributaries of the Merrimack river to be opened to the passage of shad, salmon and alewives, by directing the proprietors of dams in such tributaries to build suitable fish-ways over their dams.

SECT. 4. The mayor and aldermen of any city and the selectmen of any town bordering on the Merrimack river shall appoint one or more suitable fish-wardens and fix their compensation, to see to the execution of the provisions of the first and second sections of this act.

[*Approved May 31, 1867.*]

[CHAP. 149.]

AN ACT for the re-stocking of Mystic River and its tributaries with Fish.
Be it enacted, &c., as follows:

SECT. 1. The right to take alewives or shad from Mystic river or its tributaries, or from Mystic pond, shall be and hereby is suspended for the period of five years next ensuing, and no net, seine or weir shall be set therein during said period.

SECT. 2. Any person violating the provisions of this statute shall forfeit one dollar for every alewife or shad so taken.

SECT. 3. All prosecutions under this act shall be commenced within thirty days from the time of committing the offence.

SECT. 4. The several "committees for the preservation of fish" of the towns of Medford, Somerville, West Cambridge or Winchester, may remove

and destroy any and all nets, seines or weirs found in said waters during the said period of five years. [Approved April 13, 1867.]

The following is the Act of New Hampshire, and it has been followed by another, prohibiting the taking of shad and salmon in the Merrimack :—

“That if any person shall erect or maintain any dam or weir upon the Connecticut or Merrimack rivers, or upon the Pemigewasset or Ammonoosuck or Winnipisiogee rivers, or Baker’s river, without providing a suitable fish-way over or through the same, which shall be approved in writing by the Fish Commissioners, and be kept open during the months of May and June, in each year, he shall forfeit and pay, for each day’s continuance of said dam without such fish-way, the sum of ten dollars, to be recovered by indictment, for the use of the county in which the offence is committed. *Provided*, that this law shall go into effect whenever, and not before, suitable fish-ways for the passage of sea-fish over the dams on said river or rivers, below the boundary of this State, shall have been commenced ; which fact is to be determined by the proclamation of the governor.” [Approved July 1, 1865.]

The following is the Act of Connecticut touching the investigation by the Coast Survey ; also the Act referred to in this Report, and which regulates the fishing :—

[*Private Acts and Resolutions of the General Assembly of the State of Connecticut, May session, 1867. Page 254.*]

“Resolved by this Assembly, That the fish commissioners who may be appointed by His Excellency the Governor be, and are, hereby authorized to take steps necessary to procure information through the superintendent of the United States Coast Survey, in all matters pertaining to the fishing interest ; to learn, as far as possible, what general laws govern fish along our coast in regard to propagation, migration, &c. ; *provided, however*, that the investigation of (the) same shall not be attended with any special outlay from the state treasury.” [Approved July 27, 1867.]

[CHAP. 111.]

AN ACT in addition to “An Act for encouraging and regulating Fisheries.”
Be it enacted, &c. :

SECT. 1. No person shall take from the Connecticut river any shad, at any other time than between the fifteenth day of March and the fifteenth day of June in each year ; and no person shall set or draw any net or seine for the purpose of taking fish in said river, at any other time than between the rising of the sun on Monday morning and the setting of the sun on Saturday evening of each week ; and every person who shall at any other time, take any shad, or set or draw any net or seine, in said river, or aid or assist therein, shall forfeit the sum of one hundred dollars to the treasury of the state ; *provided*, that nothing in this section shall apply to taking of fish by order of the commissioner for the purpose of artificial or natural propagation of the same.

SECT. 2. No person shall take from the Connecticut river, any salmon, before the fifteenth day of March, A. D. 1872, and any person so taking salmon, shall pay to the treasury of the county where such offence is committed a fine of twenty dollars for each fish so taken.

SECT. 3. All complaints for violation of this act, and of the act to which this act is an addition, may be made to the superior court by the state's attorneys of the several counties where the offences are committed, and where the nuisances exist; and whenever the superior court is not in session, such state's attorneys may make complaint to a justice of the peace in any town adjoining the water at the place where such offence is committed, and such attorney shall receive the same fees for services as for trials in superior court, which fees shall be taxed as part of the costs of prosecution.

SECT. 4. For the purposes of this act and of all acts regulating and relating to fisheries, the rivers, streams, coves, inlets and bays and sounds, and all parts thereof, within the jurisdiction of the state, shall be deemed to be entirely in either county and in either town adjoining said waters, at a place where any violation of this act is committed, and the state's attorneys sheriffs and deputy sheriffs of said counties respectively, and the constables and justices of the peace of said towns respectively, shall act in relation thereto, in the same manner as though said river was entirely in the county to which said sheriffs, deputy sheriffs and state's attorneys belong, or in the town to which said justices of the peace or constables belong.

SECT. 5. The governor shall appoint three commissioners, who shall hold office for one year, and until their successors are appointed, and whose duties shall be to make complaints of all violations of the acts relating to fisheries, to the proper informing officer, to consider the subject of the introduction, protection, and culture of fish in our waters, to co-operate with fish commissioners of other states, and to make report of such facts and suggestions as may be material to the legislature.

SECT. 6. Such commissioners shall receive for their services, the sum of three dollars per day and their actual disbursements while employed in such official duty.

SECT. 7. The limitation of the time of taking shad and salmon in the first and second sections of this act, shall not take place until the legislature of Massachusetts at its next session shall prescribe the same limitations to the catching of shad and salmon in said river as are contained in said sections. All parts of the act to which this act is an addition and inconsistent herewith, are hereby repealed. [*Approved July 26, 1867.*]

R E P O R T

OF THE

COMMISSIONERS OF FISHERIES,

FOR THE YEAR ENDING

JANUARY 1, 1869.

BOSTON :

WRIGHT & POTTER, STATE PRINTERS, No. 79 MILK STREET,
(CORNER OF FEDERAL STREET.)

1869.

5

Commonwealth of Massachusetts.

R E P O R T .

The Commissioners of Fisheries appointed under chapter 338 of the Acts of 1866, beg leave respectfully to present their Third Annual Report.

FISHWAYS.

(1.) *At Holyoke.*—Another year has ended in disappointment as to this important pass. At its last session the legislature appropriated \$12,000 * for the erection of this structure, in order that no delay might come from the disputed liability of the Holyoke Water Power Company.

It was plain, that, if the Commissioners at once began the fishway, (and trusted to the courts to show in the end who ought to pay for it,) the Water Power Company might see fit to procure an injunction which would greatly delay the work. The legal advisers of the two parties debated this matter, and, with as much speed as is consistent with the profession, came to an agreement that the directors of the company should formally vote to waive notice, and to refrain from an injunction, trusting entirely to the courts for a decision of their case. It was in June that the appropriation of \$12,000 was made; but already in May the Commissioners had obtained a very detailed opinion from distinguished counsel, touching the legal obligation of the Water Power Company to build at their proper cost a suitable fishway over their dam. After furnishing plans and

* General Resolves, 1868, chap. 53.

models approved by the New Hampshire Commissioners for the satisfaction of the company, the Commissioners at last (in the beginning of August) received notice that the company's directors were about to vote the necessary waiver. On the strength of this, men and material were got together at the dam, when, suddenly, the company's agent reported that the dam was soon likely to be in condition to require no fishway, seeing that it was full of holes and promised to go off with the next freshet!

It was a matter of importance. Several millions worth of property were dependent on the power given by this dam. The Water Power Company, caught in the eleventh hour, was at its wits' end, and summoned Mr. J. B. Francis, who, like a skilful physician, is always called to patients *in extremis*. He advised the making of a great apron, or inclined plane, reared against the face of the dam. In their distress the company and the mill-owners appealed to the Commissioners to give up the men and the lumber then ready for the fishway; and the superintendent in presence of two directors, and with their consent, made verbally the following proposition:—

(1.) To take all work-people and material, without expense to the Commissioners.

(2.) To give the Commissioners a right to build the fishway in the proposed extension of the dam; and

(3.) To allow the said fishway to enter the canal on the east bank of the river, and to regulate the water for the same through the canal gates in such manner as the Commissioners and the agent of said company could agree upon.

This agreement was, on the 27th of August, approved by both Commissioners for several good reasons, but principally because the alteration in the dam would so change the over-fall that it would be next to impossible to say beforehand where the *foot* of the fishway should be placed. As the peril of the moment demanded despatch, the men and material were at once turned over, with the understanding that the agreement should immediately be signed by the parties. But although the company displayed singular swiftness in taking anything that would help their work, they experienced an extraordinary difficulty in "getting a meeting of the directors" when there was question of granting anything in return; and it was the middle of November before a regular document could be pre-

pared to their mind. This document though of several pages was easily evaporated into the following *caput mortuum*: “We give you the privilege of putting the head of the fishway in the canal and of regulating the water through its gates,—if it suits our convenience; otherwise, not.” The Commissioners believe that the agent of the company intended, so far as his influence went, to fulfil the verbal agreement, but he has doubtless been overruled by the more cautious and distrustful directors.

In the absence, therefore, of any legal papers, the above simple statement must suffice. And it only remains to reiterate the language of the last report. “If the company has the law,” (which it probably has *not*,) “one of our legislatures has put this Commonwealth in a position to be thwarted by a water power company whenever the Commonwealth should seek to render an act of simple justice to the States of New Hampshire and Vermont by giving free passage to the migratory fish of the Connecticut River.”

(2.) *On the Concord River.*—Under authority of chapter 289, section 3, Acts of 1867, the Commissioners have caused this river to be opened to migratory fishes. The dam-owners have shown an excellent spirit, and have constructed the required fishways promptly and in the most faithful manner.

(3.) *On the Ipswich River.*—All dam-owners as far up as the junction of Noyes Brook, and thence through this brook to Suntaug Pond, have been notified to build proper passes; and this has already been done by most, or by all, of them.

(4.) *At Lawrence.*—This difficult fishway has successively received many improvements, and promises next spring to offer an excellent passage to the fish. Although there seemed no great likelihood that fish bred *below* the dam would attempt to surmount it,* yet during the past season great numbers of alewives and of other fish might be seen vigorously breasting the current; and of these a good many seem to have passed into the mill-pond above. That the Lowell fishway is an entire success admits of no doubt, for great shoals of young shad (alewives too, probably,) were seen *above* that fishway, on their journey towards the sea; and their presence is in no wise to be accounted for by the very limited number that were artificially hatched in Lake Winnipisseogee.

* Report for 1865, p. 27.

(5.) *In general*, some improvements and hints in constructing fishways deserve attention. Wherever there is a rush of water the fish are attracted, and it is important that they should not be diverted from the mouth of the way by strong currents occasioned by race-ways or the over-fall of the dam, or of the waste-way.

On small streams, where the fishway takes the form of a trench, passing round the dam and emptying a good way below it, the stream may be *closed* by wing walls and a grating just above the mouth of the fishway, whereby all fish coming up are shut off from false currents and are directed to the passage round the dam. Where water is scarce, and where alewives and trout are the only fishes expected, a very narrow passage may be made to answer all purposes. A simple trough, eight inches wide and six deep, with openings four inches wide in the bulkheads, has been known to give passage to great quantities of these fishes. Too much stress cannot be laid on the necessity of having a strong rush of water from the foot or mouth of a pass: for it is this current, more than anything else, that guides the fish.

FISHWAYS.

(1.) *Of the Alewife (Alosa tyrannus)*.—This little herring, for ease of cultivation, and for the certainty and abundance of the crop, exceeds all of our migratory fishes. Along our sea-coast, and especially on Cape Cod, it meets with a ready sale, either as food or as bait for the cod fishery. Moreover, there are ancient customs connected with its capture that make it dear to our seaside people. The Cape Cod folks call it invariably “herring,” and are very particular about the name (perhaps in the way that the Virginians insist on calling corn whiskey “brandy”). At any rate, one old gentleman declared before a legislative committee, that, “unless he could call ’em *herrin*’ he didn’t want to eat ’em.”

In many of the towns this fishery is regulated by special Act,* and the right to take alewives is sold annually at auction, subjected, however, to various conditions, e. g., that they be sold at a stated price, and only to inhabitants of the town; that

* See Appendix C., *passim*.

every widow be entitled to one barrel gratis ; that the fishery take place only on certain days in the week, etc., etc. The fishing place is always at a dam, or some other obstruction, where the fish are crowded together, and may either be thrown out with a large dip-net, or fall of themselves into a net stretched on a conical frame, which closes the outlet of the fish-way, and which is called a set-net. The netters recognize several sorts and several "runs" of alewives. The *river herring* is a large variety not much esteemed, and supposed to spawn in tidal water. These are always most numerous in streams that have bad fishways ; because, when once they have spawned *below* a dam, the progeny are not inclined to go further, and lie in tidal waters. Large shoals of these "sulkers" may be seen at Squawbetty, on Taunton Great River, or at the foot of the dam, on Mystic Pond. Then there are the *gray-backs* and the *black-bellies*, which have all the marks of distinct species. The gray-back has the eye much larger and the head and lips stouter ; the lining membrane of the visceral cavity is flesh-colored, while in the other it is dark gray (hence the name black-belly.) But it is a curious thing that the young when going down in autumn, seem all to have this membrane gray, nor do their heads present the same difference as in the adult. The matter needs, and will receive, further investigation.*

Although the specific differences have not been observed in the young before they have gone to salt water, yet in all those that come thence the distinction is marked, whether they be yearlings, two-year olds, or three-year olds. As in the shad, the yearlings are all males and are fecund.† The black-bellies appear later in the season than the gray-backs, and, though smaller, are, by reason of their fatness, more esteemed.

The season lasts from the 15th of April to the 15th of June, but it varies very much with the temperature. If the weather be mild and sunny the fish push early up the rivers ; but, with a dull sky and northerly wind, they hold back. It is said, also,

* If the Philadelphia Academy is short of "copy," here is a chance for some such paper as this : "On a supposed new species of *Alosa*, by Dr. Theodorus Branchia," and beginning, "Should this prove, on further investigation, a new species, I propose for it the name of *A. cæruleogaster*. Branc."

† See Report for 1867, p. 40.

that a variety of the fish that usually runs up *early* in the season will preserve this habit if transplanted to other waters; for example, the early alewives of Martha's Vineyard when brought over to Cape Cod. When a fine day suddenly comes, the alewives, as afternoon approaches, mount the fishways in compact crowds, utterly regardless of the noise of mill-wheels, the presence of by-standers, or the continual sweep of the fatal dip-net, which casts them by pecks into a great bin, where they frantically flop, filling the air with a shower of silver scales. A single fishery on a trivial stream will often yield a hundred barrels in a day. The reason of this abundance lies in the great number of eggs laid by this herring. The ovary of a small black-belly weighed 2 oz. $1\frac{1}{2}$ dr. ($17\frac{1}{2}$ drachms,) while the whole fish was only $5\frac{3}{4}$ oz. So that the eggs were more than a third of the total heft of the animal. Now 10 grains ($\frac{1}{6}$ of a drachm) contained 2,530 ripe eggs, making a computation of 265,650 eggs for the entire ovary, or upwards of a quarter of a million.

This is about four times as many as the shad lays. And this little fish of six ounces would produce more young than twenty salmon of fourteen pounds each. With these figures it is no longer difficult to understand how the alewives, with slight encouragement and protection, will annually return in immense quantities, to their native ponds. Like the shad, their growth occupies three years or more, and the females do not run to fresh water till two years old. This is shown not only by examining the various sexes and sizes to be found in our fresh water, but is proved by cases where they have been cut off wholly or partly from their breeding-grounds. Thus if a dam be put across a stream, so as wholly to bar the fish from their breeding-grounds, they will return in quantities for *three years*, but, on the fourth, they will almost disappear. Again, if the area of their breeding-grounds be contracted, the diminution in the run will not take place next year, but in two years.* Whereas, if the fish grew to full size in a year, some great change ought to occur the very *next season* after any disturbance of their spawning-beds.† Encouragement has been given to this humble

* We are indebted to Mr. George Sanford, of East Wareham, for valuable illustrations of the habits and growth of alewives.

† Mr. Thaddeus Norris, in his *American Fish-Culture* (1868), doubts the length of time allowed for the growth of shad, and says (p. 143): "The supposition that shad remain at sea two years is yet to be proven. I know, from personal observation, that their growth

but useful species by opening the Mystic, Concord, and Ipswich Rivers to it, and by putting 1,000 alive into the mill-pond above the Lawrence dam. The importance of its cultivation has also been urged on the sea-coast population, and a few years will undoubtedly show a great increase in the crop.

(2.) *Of Shad. Experiments at Holyoke.*—As early as June 8th, Mr. Corey Smith had hatched out, in one of Green's old boxes, a batch of young shad. These were eggs from one of the early runs; and the evidence now goes to show that there are four or five such runs of "ripe" fish, and that mature spawn could be obtained, at intervals, from May to August. Seth Green began to hatch shad on the 22d of June. He was furnished with his patent boxes in plenty, and with men to haul the seine and to watch the spawn. A year's experience had taught him many new things, and he was able to proceed with more regularity and certainty. His experience in several rivers, as the Delaware, the Potomac, the Hudson, the Connecticut, and the Merrimack, has shown that, although many females may be taken in the day-time, *ripe* females are only to be got in numbers at *night*. For example, a haul made at 8 P. M. will often afford only two or three spawners with fifty males; whereas at 9 P. M. the seine may bring in one-half spawners. Near quick water, the best time for hauling is from 8.30 P. M. to 11.30 P. M. When pressing out the eggs it is well to keep the fish touching the water. After letting them stand ten minutes, fill the vessel up with fresh water and let it remain half an hour longer, giving it a tilt from time to time. Then put the eggs in the box, whose bottom should be of gauze, at least twenty wires to the inch (instead of fourteen,) because when the box bobs in a current the eggs get wedged in the net-

is rapid, for I have taken scores of them in August, when fishing in a deep tideway for white perch, the size averaging six or seven inches in length." How did Mr. Norris know that these fish were not over a year old? At p. 141 he has copied a figure of a young shad at the end of September, which is but four inches long, while those figured in August are proportionately smaller. It is not "a mere supposition" that the female yearling shad remain at sea. The yearling fish may be taken by barrels and cartloads in the Connecticut River, as far up as Hadley Falls, but they are, almost without exception, *males*, and are fecund. There are no females to be found but of a size much larger, and corresponding to another set of male fish; therefore they are called two-year olds. The same is true of alewives, every very small fish is a *male*. Mr. Norris *does* make "a mere supposition" when he supposes that some young male shad stay in the river all winter. Every known fact is against such an idea, (see Report for 1866, p. 5, 1867, p. 40.) Mr. Norris' little book is an excellent one, and has all the latest information, given in few words.

ting, if it be *too coarse*, and the young make their escape for the same reason. Green visited several points on the two rivers, to give instruction in hatching, and continued his own work at Holyoke with entire success, until the extraordinary and prolonged hot weather of July, which killed large quantities of fish in various parts of the country, and even destroyed trout in the Rangely lakes of Maine. The effect shall be given by Green *verbatim*:—

“July 16th.

“*Friend Lyman*:—I have quit to save expense. Last Monday (13th,) the spawn began to suffer from some cause. I was in trouble; I did not stop looking. I had never seen spawn suffer from too warm water. Tuesday (14th,) began to think perhaps the water was too warm. Put a string of boxes in the mouth of the creek and tailed them out in the river. Water in the *creek*, 66°, 11 o'clock, P. M.; the tail end box, 84°. At daylight, in the morning, the box 66°, all good; the spawn 84°, all dead! I had a sure thing! I put a box up in the creek, 66°; all good until 12 o'clock the next day. The water in the creek had gone up to 82°—spawn suffering bad. The next day fifty per cent. dead; the next, seventy-five. The rest hatched, but not healthy. The cause was what I looked for; and I found it, and I felt proud. I would have staid for ten cents a day, if I had not found the cause of the spawn dying. I found it, and had nothing to do but set down and sweat! That ain't me!”

To public speakers and writers this letter may serve as a model in the art of saying *what you have to say* in few words, and then stopping instantly.

At *Double Ditch*, near Springfield, an independent attempt was made, in order to see if the fishermen, generally, could be intrusted with the process. The person who tried it, a fisherman of experience, continued from June 20th to the first week in July, and *never hatched an egg*; they all spoiled. He described the spawn as not flowing freely, but as coming “in lumps,” (not ripe.) The causes of his failure were: 1. That he did not haul enough at night, and therefore got no ripe females. 2. That the eggs thus obtained were immature and could not be impregnated. 3. (Perhaps) that the water was too sluggish to hatch spawn well. But, besides this, there is room to suspect that ripe fish are only to be got in quantity

on or near their spawning grounds. If, however, it is their habit to go on their beds early in the night, and then to fall down the river, they might be taken, at points below their spawning grounds, either very late at night, or early in the morning.

At *North Andover*, on the Merrimack. The hatching here was faithfully pursued by Mr. A. C. Hardy, who began on the 24th of June. After some failures, he learned to do the work very well, although the supply of spawners continued small and uncertain, until the middle of July, when he stopped. He has since reported extraordinary numbers of young shad going down, a promising feature that comes of the present law prohibiting fishing on that river for five years.

On *Concord River*, *Lake Winnepisseogee*, and *Mystic River*. A certain amount of spawn was carried to these places and hatched; and it was found that shad-spawn, in tin pails or cans of water, could be transported for several hours and hatched with entire success. Another year, larger quantities will be sent to the proper points.

The past season has been a very poor shad year in all the Middle and Northern States. On the Connecticut the catch has been from one-third to two-thirds of the average. But while this has been the rule on the Connecticut River for *large fish*, the *yearlings* have been seen at all points in *extraordinary abundance*. They are reported as two or three times more plenty than usual. It would be too much to say that this was entirely owing to the *artificial hatching* of last season; though it may be properly attributed to this cause. In order to determine the actual numbers taken, the Commissioners distributed among the fishermen blank tables, on which to make returns of the number taken each day. And, although comparatively few were willing to take this trouble, still enough sent in their reports to give some valuable data.

From one pier-seining fishery, near the mouth of the Connecticut, returns were received for eighteen successive years, showing the number of large, marketable shad taken each season, to wit:—

1851, . . . 15,942	1857, . . . 5,690	1863, . . . 5,703
1852, . . . 5,642	1858, . . . 9,957	1864, . . . 4,058
1853, . . . 7,940	1859, . . . 5,117	1865, . . . 4,394
1854, . . . 4,703	1860, . . . 6,232	1866, . . . 7,223
1855, . . . 8,830	1861, . . . 7,708	1867, . . . 4,159
1856, . . . 6,777	1862, . . . 6,309	1868, . . . 3,733

It will be at once observed that, in 1851, the catch was nearly 16,000, but that in no season since then has it come up to 10,000 and has exceeded 8,000 only twice. The Holyoke dam was finally closed in 1849. The season of 1848 was *the last in which the fish had access to the extensive breeding grounds above Hadley Falls*. The young of that year were marketable fish in 1851. All the three-year-old fish taken *since* then were bred in the contracted grounds below the Holyoke dam, and were consequently much less numerous.* The catch of 1852 was about one-third that of 1851. Why? Because in 1849 the shad were suddenly stopped by the dam, and, there crowded together, were taken in vast quantities, (2,000 at one haul.) The *spawning* of 1849 was broken up; the *crop* of 1852 was small. Now, throwing out 1851, we have a total catch, in seventeen years, of 104,475, or an average of 6,145 for each season. The years falling *below* this average were 1852, 1854, 1857, 1859, 1863, 1864, 1865, 1867, 1868. Those *above* this average were 1853, 1855, 1856, 1858, 1860, 1861, 1862, 1866. That is to say: in the first nine years, five were *above* and four *below* the general average. In the second eight years, three were *above* and five *below* this average. In the first nine years the total catch was 60,888, and the average 6,765; in the second eight years the total catch was 43,587, and the average 5,448. To sum up, the average catch of the *last* half of the seventeen years, since the Holyoke dam was closed, has been only about *three-fourths* of that of the *first* half.† And the

* See parallel instances under head of Alewives.

† This calculation corresponds well with one made for a different part of the river, and on different data. See Report for 1865, p. 37.

product of the fishery, during the whole of this time, has probably not exceeded one-half that of a corresponding period *before* the dam was built. For it should be borne in mind that the year 1851, above quoted, was not an unprecedented one; on the contrary, 1848 was still better, and a single haul of 2,600 shad was then made on this very pier. Were there no disturbing causes, *good years* and *bad years* would go by *threes*. That is to say, a good or a bad spawning would be followed, in three years, by a good or a bad crop. And, in fact, it often so turns out. Thus, 1848 and 1851, 1855, 1858 and 1861 were good; while 1854 and 1857, 1864 and 1867, 1865 and 1868 were bad. The disturbing causes, however, are many. There may be a great lay of spawn, but much of it may be destroyed by sudden hot weather (as during the past season,) or by muddy freshets. Again, the crop of large fish may actually be abundant, but if great quantities of turbid snow-water be continually discharged from the river during the spring, the schools hesitate to run up and loiter in the delta of fresh or brackish water at the river mouth. Then it is that the pounds, which are set only in the bay, do well, while the river fishery proper is small. Such a state of things is also illustrated by the past season, when partly from the great flow of cold, muddy water, the seine, pier and drag-net fisheries were the poorest ever known, while the *pounds* gave an average product. In their last Report,* the Commissioners hinted that some singular testimony was given by the owners of these pounds (!), who stated there were but eight pounds set from the light-house at the mouth of the Connecticut River to Cornfield Point, a distance of five miles. They were, farther, at great pains to show that their pounds did little damage by the capture of young shad, and were vastly beneficial in the destruction of sharks and other predatory animals. Remembering that “seeing is believing, and feeling is the naked truth,” some of the Commissioners from New Hampshire, Connecticut and Massachusetts (during May of the present year,) took a sail-boat and proceeded to examine the ground between the light-house and Cornfield Point in which space they counted *twenty-six pounds*. From which we are forced to believe either that this industry

* Report for 1867, p. 8.

took an unprecedented start during the past year, or else that the men who testified before a committee of the Assembly were troubled with a shortness of memory! The actual process of "drawing" a pound was calculated to impel the mind (however regretfully) toward the latter horn of the above dilemma. This usually takes place once a day, and can only be effected at slack water and in tolerable weather. The men proceed in a scow to the bowl, and close its entrances by drawing across them a net called the "apron." Everything within is now safely imprisoned. The men then go round the bowl, hauling up the net-bottom, which they constantly shake, to extricate the meshed fish and to work the mass into one corner. When this is done, the whole are dipped out into the scow. At this drawing one or two cartloads of fish were thus dipped out. They consisted of shad, of all sizes; sea-herring (*Clupea elongata*,) hickory shad (*Alosa lineata*,) and a few tautog (*Tautoga Americana*) and weak-fish, or squiteague (*Otolithus regalis*.) The only representatives of the destructive sharks mentioned in the "testimony," were some little harmless rays, about the size of a dinner-plate. The large, "marketable" shad were thrown into a "buyer's" boat. There were only about 70. What, then, was the rest of this mass of fishes? As near as one could judge, about *one-fourth were yearling shad*. The total drawing could not have been less than twenty barrels, of which five barrels must have been yearling shad, which, at 300 to the barrel, would be 1,500; which is a proportion of 21 *small* to 1 large shad. Now complete returns from three pounds set during the past season, in Westbrook, show that the average catch of each was nearly 11,000 *large* fish. But, giving an average of only 7,000 (which was the testimony of the pound-men themselves, before the Assembly's committee,) then twenty-six pounds, from the light-house to Cornfield Point, would give 182,000 large shad, and, by a proportion of 21 : 1, 3,822,000 *yearling shad*, or 12,740 barrels, which were sold as salted herring, or *for manure*! Most of the pound-men took good care to make no return of their catch; and the above calculation is of course a rough one; but the testimony of the pound-owners before the committee was much more "rough," and in a different sense. This outrageous slaughter of young fish has at last been forced on the

attention of the seiners and dragmen, and by their concurrence, and the strenuous exertions of the Connecticut Commissioners, the Assembly, at its last session, passed an admirable law,* limiting the size of net-meshes, and giving a "close-time" of thirty-six hours in each week.

(3.) *Of the Black Bass, (Grystes fasciatus.)*—Mr. Tisdale was at great pains to get the impregnated spawn during the season, but without success. A male and female were confined in one of Green's hatching boxes, having a slatted bottom, so that the spawn would drop through and be protected from the parent fish.† Thus confined they become sick, and infested with the confervoid called *byssus*, despite a good current of water. They were therefore liberated. Next, several pairs were put in a large pool, and were taken out and pressed from time to time. But though they regularly swept their beds, and at last spawned in the pool, no spawn could ever be procured by the artificial process. Finally, all fish taken with the hook in breeding season were examined, but none would yield spawn. Doubtless a spawn bed can be arranged on Ainsworth's principle that will answer the purpose. This fish has been scarce, or hard to take, the whole season. One reason may be the high water, which gave so much feed that they did not care to bite. Nevertheless, several ponds have been stocked with this valuable species, at the expense of the State.

(4.) *Of the Smelt, (Osmerus Viridescens.)*—Particular attention was called last winter to this delicious little fish by a petition to the legislature for a protective law. It appeared, at the hearing, that it has been customary to seine them in the estuaries or streams up which they pass to spawn. The seine used may be 360 feet long and 20 feet deep, with a $1\frac{1}{2}$ inch mesh, and is stretched diagonally from bank to bank. After, in this way, stopping everything that tries to pass, one end is hauled to the same bank as the *opposite* end, and all the contents are taken in the loop thus made. In one instance, 6,700

* See Appendix. The attention of the legislature is earnestly directed to the fact that the above law is conditional on a similar one being passed by Massachusetts during the session of 1869.

† It will thus be seen that the idea of Ainsworth's spawning-bed (soon to be described) presented itself also to Mr. Tisdale, without correspondence between the discoverers.

pounds of smelts were taken thus at one haul! As twelve usually go to a pound in the "school" fish, this would make 80,400. These fish that run in large schools are the young, while the older fish, which sometimes weigh as much as 10 oz., are fewer, and consequently more scattered. It was maintained that they would not take the hook after they had been three or four weeks in tidal or fresh water. This was again denied. The truth very likely is, that as the spawning season approaches, the gravid fish cease to feed, (as among other Salmonidæ;) but since there may be several successive runs, which spawn at different times, there are always fish that will bite, up to a certain season. It will be observed that the habit of the smelts is just the reverse of that of the salmons; for the former approach tidal and fresh water in *autumn* and remain all winter, backing down from the brooks when the weather is too cold, and pushing up again in spring to spawn on the gravelly and rocky bottoms; whereas the latter run up in spring and spawn in the fall. It is on their spawning beds that the smelts are taken with dip-nets in great quantities. They are then usually soft and poor for food, but this did not deter the fishermen, who knew there were plenty of people ready to buy and eat them. The following table shows the number of dozens of smelts taken by two dip-nets during thirteen seasons, at the back-water dam, in Milton, on the Neponset River:—

1855, 300 dozen.	1862, 417 dozen.
1856, 100 "	1863, (3 nets,) . . 2,275 "
1857, 21 "	1864, 850 "
1858, 1,113 "	1865, 1,715 "
1859, 507 "	1866, 714 "
1860, 927 "	1867, 1,151 "
1861, 725 "	

Now the question rises, why should not these fish be caught at one season, and at any one place, as well as at another? If a fish that spawns in April be taken in October, it is not full of spawn; but then, if allowed to live, it *would have been* full of spawn in due season. So far, then, as the individual is concerned, it makes no difference in its progeny for that year whether it be taken before or after the spawn is developed.

All fishes that go to fresh water to breed, seek their proper birth-place, and they are then concentrated and crowded together, and are, moreover, very tame, so that it then becomes possible to capture them in vast quantities and in a limited space; and, unless they be at that time protected, they are liable to extinction in the particular waters where such wholesale destruction goes on. Therefore it was that the last legislature afforded such proper protection.*

(5.) *Of the Trout, (Salmo fontinalis.)*—During the last year, the general and growing interest in pisciculture has turned chiefly towards this easily bred species, and several establishments, private or public, have been started.† With these have come also improvements, among which may be mentioned a box for rearing the young, which consists of a long trough with partial cross-bulkheads, (as in a fishway,) and with a cross-trough at the head, making a letter T. This cross-trough is grated, and, by its long surface, admits much more floating food than would enter the end of the rearing trough proper. Mr. Ainsworth, to whom we owe many valuable inventions, has contrived a new spawning bed which promises excellent results. On the floor of a trench he lays horizontal screens of fine wire; one inch above these he lays similar and parallel screens, but of coarse wire, with a $\frac{1}{2}$ inch mesh. On these last he spreads one or two inches of gravel, so coarse that it will not fall through. The trout pair in the trench; the female sweeps the gravel, clean to the wire, bends into the nest thus formed, and discharges some spawn, which *falls through to the lower screen*, where it is reached by the spermatic fluid of the male. In this way, the danger and trouble of handling the fish is avoided, while the spawn, thoroughly impregnated and protected from enemies, may be, from time to time, removed to the hatching troughs. Mr. E. A. Brackett, of Winchester, has tried this with entire success, and has improved on the process in a way that promises the best results. He makes the lower screen of a simple wooden frame, $\frac{1}{2}$ inch deep, and with a cleat below to raise it from the ground. The bottom of this frame is made of common “mosquito-bar,”

* See Appendix C.

† Both Mr. Livingston Stone, of Charlestown, N. H., and Messrs. Robinson & Hoyt, of Meredith, N. H., have much improved and enlarged their establishments.

stretched and tacked, which is further strengthened by a diamond network of coarse twine, each diamond being about $1\frac{1}{2}$ inch long. The gauze and the network are in contact, and the latter serves also to hold the spawn in place. Both gauze and network are saturated with rosin varnish, and are then well heated to drive off the turpentine. Finally the whole, including the frame, gets a coat of shellac varnish. These frames, when covered with spawn, may be put directly in the hatching troughs, without any gravel below or above; and the advantage is, that if any sediment collects, it may be easily washed through the gauze, and pass off in the open space below. Further than this, there seems no reason why this artificial spawning bed should not be in the *hatching house itself*, with a small fishway leading into it from the pools where the breeders are kept. As the season comes on, the trout will go up the fishway into the spawning bed; and thence the lower screens, covered with their ova, may, from time to time, be removed to the hatching troughs. The whole apparatus is as cheap as cheap can be, and presents great inducements to our farmers and fishermen. Certainly they would not hesitate to begin this industry did they know the little labor needed and the considerable food and profit to be derived. They should know that the *skim milk* of one good cow turned into curd will plentifully feed 500 pounds of trout, and with what they themselves pick up, will cause them to grow rapidly. Now will it feed 500 pounds of pork? The trout are worth at least \$250, the pork not more than \$80. A bit of curd the size of the finger, rubbed and washed in a bowl of water, is enough food for 10,000 young trout fry, just after absorption of the sac.* Cape Cod is especially adapted to the culture of the finest trout, for it is not the celebrated Marshpee River alone which is capable of producing them. Every tiny creek or rill that empties into salt water is available for their culture. The trout of the Marshpee, after spawning in the river, go down stream, and by December 1st are all collected at its mouth, where numerous springs, gushing from the high banks, furnish a plentiful and equible water; here they lie during the winter, sometimes even buried in the mud, all but the head. They

* Norris: American Fish Culture, p. 73.

are then dark and in poor condition. In sunny, warm days, they venture forth, and are sometimes killed from being caught in shoal water by a "cold snap," when the ice makes round them before they are aware of their danger. In the middle or end of March they push out into the brackish water of the bay, going back and forth with the tide, and feeding voraciously on the small shrimps which there abound. About the middle of May they begin to run up the river, and they are then in beautiful condition, with dark green backs and silvery sides, and the roof of the mouth light colored. The great run of prime fish is in June. During the summer heats they lie in the deep holes under the banks, and gradually lose their sea-coat, taking on the spots and mottles of a brook trout, from which they cannot readily be distinguished when kept for a year in confinement. So far as is known, *all* so called brook trout will go to the sea if they get a chance, but will not therefore resemble each other. When a trout is highly fed, he becomes "pig-bodied," and his head seems diminutive, (Marshpee variety;) but if his food must be worked for, his body becomes long and graceful, and the head is conspicuous, (Red Brook variety;) finally, if he be starved for part of the year, the head becomes disproportionate, and the body is small. The growth of sea-going trout is rapid, and a marked fish from Quashinett Brook, which was put in Marshpee River weighing 4 oz., was taken in two years, and had gained one pound in that time.*

(6.) *Of the great White fish, (Coregonus Albus.)*—Mr. James Rankin, Commissioner of Connecticut, has gone to Sackett's Harbor in quest of the eggs of this fine and valuable fish. He has already sent some, but the result of the experiment will belong to the next report.

(7.) *Of the St. Croix "Land-locked Salmon" (Salmo, sp. ?)* Orders are out for collecting the ova of this species, as well as those of

(8.) *The Lake Winnepisseogee trout, (Salmo namaycush ?)*—A fish valuable for its large size, and which, with improved food, we may hope to make even a delicate fish.

* Much of the above information about the Marshpee trout is from Mr. G. L. Fessenden, of Sandwich.

(9.) *Of the true Salmon, (Salmo Salar.)*—The experiments of last year, so promising at first, ended in much disappointment. In the first place, of the 70,000 ova obtained by Dr. Fletcher with much trouble, only about 10,000 were found to be impregnated. It is not easy to say which, of the many possible causes, led to this failure. The eggs may not have been thoroughly mature, and the same might be true of the milt, which, there is reason to think, is not always in a fertilizing condition. It is, however a risk that is always to be run whenever fish are sought, under difficult circumstances, and in their native haunts. Of the 5,000 young hatched by Mr. Stone at Charlestown, nearly the whole were lost during the hot days of July, already spoken of, though those at the establishment of Robinson & Hoyt, at Meredith, N. H., remained healthy. It seems that there is much hazard in leaving young fry in the somewhat confined space of an ordinary trough. They require *space* and *nature*. They would do much better in an artificially arranged brook, with a netting at each end. During the present summer Mr. Livingston Stone, with the encouragement of the Commissioners of New Hampshire and Massachusetts, made preparations to take spawn in a regular manner. He got permission, under certain conditions, from the Canadian government,* to stretch a net across the north branch of the Miramichi, and stop all salmon. Having put up a suitable hatching house, he began (after great opposition and loss, that arose from an informality in his papers,) to take the ova; and he succeeded in getting about 425,000, of which one-half are to be left in the country, according to the agreement, and the other half have already been shipped for Charlestown, N. H. Massachusetts and New Hampshire hope to get 140,000 together, which will be for the Merrimack and other streams. Mr. Stone deserves credit for persevering under great difficulties, but his success could hardly have been such as it has, without the official assistance which he constantly received from Mr. W. H. Venning, the Inspector, whose courtesy deserves the best thanks.

(10.) *Of the White Perch, (Labrax rufus.)*—This excellent “pan-fish” will certainly be destroyed unless protected from

* From the Minister of Marine, through W. F. Whitcher, Esq., Secretary.

seining through the ice in March, when congregated in the deep tidal holes, at the mouths of streams. It should have the benefit of a law similar to that for smelts. Such laws would help the poor in several ways; and especially many men thrown out of other work by the cold weather, could earn an excellent living with hand lines; whereas, now the fishery is often monopolized by those who have money enough to get nets.

Having spoken of several species worthy of cultivation, it may be fitting to speak of two that should be cultivated only by throwing them on land and cutting their heads off! These are the mud and pond *pickerels*, (*Esox ornatus* and *reticulatus*). More abominable animals there are not! And the best proof that our people crave fish is, that they are willing to eat pickerel! To raise other fishes near them is like trying to raise poultry under a hawk's nest. They penetrate even to cold trout brooks, and devour the young of every species that comes in their way; so that they utterly depopulate the waters, and convert thousands of the finest fishes into their own soft, muddy-tasting flesh! If the State would offer a premium of \$5.00 a cartload for them it would be money well spent. Instead of this, these ogres are actually *protected* by laws,* and may be taken only in certain ways and at certain times, under penalty of \$1.00 for each offence. Yet there is not a fifty-cent pickerel that has not swallowed ten dollars' worth of better fish than himself.

NECESSARY LEGISLATION.

If sheep, cattle, and horses could be legally killed, or caught and sold, by the first passer-by, whenever they were kept in a field exceeding ten acres, or whenever they chanced to stray into a neighboring road or pasture, it is not likely that these useful animals would be much bred. Or if chickens, turkeys, ducks and geese were under cover of the law only when they were in their own coop, we should have little to give thanks for at Thanksgiving. But these creatures very properly *are* protected and are recognized as *property*. That this character of *property* should also be extended to food-fishes, under certain circumstances, was illustrated in the last report.† At present

* General Statutes, 1857, Chap. 30. 1860, Chap. 83.

† Report for 1867, p. 6.

they are all, in law, "wild creatures," (*feræ naturæ*), and may be protected only within the limits of the owner's estate; if they pass beyond those limits they belong to the first finder. What then is the position of a man who is ready to put his capital into pisciculture, and who prepares to supply the market with so many thousand pounds of trout, just as a Rhode Islander would supply it with so many turkeys? He owns the land round a pond of twenty acres, and a fine spring-fed brook, which flowing thence, runs to the salt water. He puts up a hatching house; digs his pools; makes a dam and flume. He hatches and rears large quantities of trout, which grow rapidly, and live in the pond and brook, and go also to the sea in their season. One fine morning, he finds half-a-dozen men fishing at the mouth of his brook, each one with a basket full of his trout. He remonstrates. They reply, "tidal water!" and go on fishing. In despair he seeks consolation in his pond. Lo! there are more men with more baskets of his trout. Again he remonstrates. "Great pond!" reply the anglers. "Over ten acres—free fowling and fishing according to ancient charter!" Sadly he seeks to ease his mind by strolling up a tributary brook which comes in through a neighbor's land. Behold! there is the neighbor himself, with a basket of trout taken from the brook. "Very sorry," says the neighbor; "the *trout* may be *yours*; but the *brook* is *mine*!"

Is this state of things justice? Is it common sense? Is it true law? None of these! It is injustice, nonsense, and outlaw. In point of fact we are trying to live under laws that applied, not to a rich, densely populated and intensely commercial people, but to a feeble community of scattered habitations, without great industries, and relying partly on game to eke out the scanty products of the newly-cleared forest land. If there be a general principle in our legislation, it is that *every industry* (new or old) *should have a fair chance*. Now fish culture (and oyster culture as well) *has, within these few years, become a true INDUSTRY*,—one that should bring wealth to individuals and revenue to the Commonwealth. It asks only a fair chance, —neither premiums nor a protective tariff—but only that our inland waters should, in a large spirit, *be thrown open* to the energy of private persons; for with us it must always be private persons, and not the government, that build up new industries.

With other branches we have done so. A man, or a company, may build a dam, only they must, of course, pay damages if they drown the land, and they must further give right of way to boats and to fish. Again, a railroad may be a private nuisance, but it is a public benefit; therefore it may go through a man's flower garden or through his parlor, and he has damages, but no appeal. From another point of view, patents and copyrights are devices to compel a community to reward the skill of a particular person. All these are, more or less, *privileges* to encourage enterprises, general or special. *Privileges* they are, because they most always inconvenience certain people, though they benefit many more. And this injury or inconvenience is an element of nearly every change for the better, and is to be calculated and to be expected. The invention of a machine at first throws hand-workers out of employ; the invention of a better machine destroys the owners of the first machine. We may therefore feel happy if it can be shown that this fish culture can receive its rights without anything more than a *theoretical* injury to the community, or rather a *theoretical deprivation of privilege*; just as a boy might have a theoretical deprivation of the privilege of picking pears off a tree that never bore any. What the pisciculturist asks is *control over the inland water as far as concerns the fish*, and no farther. He cares not for boating, skating, ice-cutting or manufacturing. He only says: "If I spend time and money, let me have their fruits protected like any other laborer." But as the law now stands* he cannot prevent people from *stealing* his fish in a pond of over ten acres, or in a stream where the tide ebbs and flows. Nor can he reclaim his fish when they escape, even though they be marked. (A log-driver *can* reclaim his lost logs, and he who cuts them up will find them dear firewood!) The section of the ancient charter, that "all householders have free fishing in any great ponds, bays, coves and rivers, so far as the sea ebbs and flows," is now as obsolete and injurious as the one that declares that "whatsoever person shall endeavor to draw away the affection of any maid, under pretence of marriage, before he hath obtained liberty from her parents, (or of *the nearest magistrate*,) shall forfeit, for the first

* See Appendix C, law of great ponds and navigable streams.

offence, five pounds!"* What is needed is not the *repeal* but the *modification* of the charter provision, by giving to owners of the shore line of "great ponds" ("riparian proprietors") the control of the water opposite their land for purposes of fish culture alone, without detriment to other common rights of the community; and so forbid the taking, in tidal waters of small streams, (without permission of the owners,) of certain cultivated fish, such as trout, salmon, etc.; or, in other words, to combine in one great and general Act the easements and the encouragements often heretofore granted in the special Acts by which our statute book is encumbered. Let us a moment glance at these numerous laws, of which a pretty complete digest is presented in Appendix C. Fundamentally it is to be noted that, under the ancient charters, citizens have free fishing in great ponds and in tidal waters, *only* when the same have not been "otherwise appropriated" by the town or by the legislature. We then are to consider the different ways in which the legislature, during the last twenty years, has "otherwise appropriated" such fishery rights; or in other words, in what manner the legislature has, for general good, taken rights from the citizens at large, and transferred them, with or without consideration, to towns, to companies, or to individuals. In many of the streams emptying into the sea the shad and alewife fisheries are made a monopoly of the towns, (see Appendix C, chap. 401, Acts 1855; chap. 89, Acts 1860, etc., etc.,) and these towns sell them to the highest bidders, who, in turn, sell the fish to the people. Here the citizens cannot fish themselves, but must buy fish. Nor does the sum paid to the town treasury really help the poorer people by diminishing their taxes, because their taxes in any event amount to little or nothing. Nevertheless such control of these fisheries is wholesome.

By chap. 183 Acts 1865, chap. 117 Acts 1863, chap. 95 Acts 1853, the fisheries of various great ponds are handed over to the control of towns, to exclusion of citizens at large. By chap. 187, Acts 1866, a general provision is made for corporations to obtain exclusive right to alewife fisheries created or improved by them, in streams or ponds, no matter of what size. Chap. 290, Acts 1868, gives to individuals entire control

* Colony Laws, Chap. LXVI.

of trout fishing 200 yards into navigable tide-water. A company gets exclusive control of an island for fish-breeding in chap. 200, Acts 1867, with privilege of stopping up coves and creeks, and of forbidding fishing within forty rods of the shore. There are a score of Acts within as many years that grant extraordinary and exclusive fishing privileges to companies or to combinations of individuals, (chap. 231, Acts 1854, etc.,) and there are many more Acts granting the privilege of making weirs in tidal water on the sea-coast, which weirs are a permanent obstruction, and have all the characters of an exclusive fishery, (chap. 51, Acts 1855, etc.) Most of the Acts above quoted are good and really beneficial, and usually their only great fault is their partial and variable character.

The whole tendency of our legislation of late years has been *to support our exhausted inland fisheries, by granting privileges to those who would improve and increase them.* And now that fish culture comes forward as a well defined and true *art*, it is the first duty of our legislature to pass such enactments of general application as shall insure the rapid development of this art, without forcing its followers to go through long, uncertain and tedious forms of special legislation to gain the protection that is necessary to success. Our inland fisheries with the hook-and-line now practically amount to *nothing*. If some favored spots be excepted, all that rewards the patient angler is a few miserable pickerel, or some little perch, pouts, and shiners. Instead of this, each pond and brook might teem with the best trout, black bass, white fish, land-locked salmon, etc., if only they were recognized as property. The needed legislation may thus be recapitulated in its briefest form:—

1. Great ponds and minor tidal streams shall *be controlled by their riparian proprietors, so far as concerns the taking of certain cultivable fishes.*

2. The Commissioners of inland fisheries shall, under certain conditions, have power to set apart waters for breeding fish, and to prohibit fishing therein for stated times, or at stated seasons.

3. The putting of drugs and dyestuffs, or deleterious products of manufactures into ponds and streams, shall be prohibited.

4. There shall be a certain and uniform number of days in each week of the fishing season when fishing shall be prohibited.

It would, of course, be too long a task to show in this place the details of such legislation. It is only proper to add that it would necessitate no interference with the present local laws in regard to certain fisheries, especially that of the alewife.

The Commissioners respectfully suggest an appropriation of \$2,500 to enable them to continue the introduction of valuable food-fishes during the coming year.

All of which is respectfully submitted.

THEODORE LYMAN,
ALFRED R. FIELD,
Commissioners.

A P P E N D I X .

[A.]

NEW ENGLAND COMMISSIONERS OF RIVER FISHERIES.

MAINE.

CHARLES G. ATKINS,	.	.	.	.	.	.	<i>Augusta.</i>
NATHAN W. FOSTER,	.	.	.	.	.	.	<i>East Machias.</i>

NEW HAMPSHIRE.

Hon. H. A. BELLOWES, (Chairman,)	.	.	.	.	.	<i>Concord.</i>
W. A. SANBORN,	.	.	.	.	.	<i>Weirs.</i>

VERMONT.

Prof. A. D. HAGER,	.	.	.	.	.	<i>Proctorsville.</i>
Hon. CHARLES BARRETT,	.	.	.	.	.	<i>Grafton.</i>

MASSACHUSETTS.

THEODORE LYMAN, (Secretary,)	.	.	.	.	.	<i>Brookline.</i>
ALFRED R. FIELD,	.	.	.	.	.	<i>Greenfield.</i>

CONNECTICUT.

HENRY WOODWARD,	.	.	.	.	.	<i>Middletown.</i>
JAMES RANKIN,	.	.	.	.	.	<i>Old Saybrook.</i>
JAMES A. BILL,	.	.	.	.	.	<i>Lyme.</i>

RHODE ISLAND.

ALFRED A. REED,	.	.	.	.	.	<i>Apponaug.</i>
NEWTON DEXTER,	.	.	.	.	.	<i>Providence.</i>

[B .]

The following is the legislation for 1868 which touches inland fisheries :—

[Chap. 53.]

RESOLVE concerning a Fishway over or around the Dam at Holyoke, on the Connecticut River.

Resolved, That there be allowed and paid out of the treasury of the Commonwealth, and the same is hereby appropriated, a sum not exceeding twelve thousand dollars, to be expended under the direction of the commissioners appointed under chapter two hundred and thirty-eight of the acts of eighteen hundred and sixty-six, in the construction of a fishway over or around the dam at Holyoke, on the Connecticut River, in accordance with the provisions of said chapter two hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six. [*Approved June 4, 1868.*]

[Chap. 179.]

AN ACT for the Protection of Smelts.

Be it enacted, &c., as follows :

SECT. 1. Whoever catches any smelt from the first day of February to the first day of May in each year, in any manner whatever, or at any season of the year in any other manner than by hooks and lines or hand nets, shall forfeit twenty-five cents for each smelt so caught, to be recovered by prosecution before any trial justice or court competent to try the same: *provided*, that nothing herein contained shall apply to any person catching smelt in any seine or net in Taunton Great River, while fishing for herring or alewives.

SECT. 2. The commissioners of river fisheries may take any kind of fish at any time for the purpose of obtaining spawn for artificial propagation of fish.

SECT. 3. All prosecutions under this act shall be instituted within thirty days from the time of committing the offence. [*Approved May 4, 1868.*]

[Chap. 128.]

AN ACT to amend "An Act for the Re-stocking of Mystic River and its tributaries with fish."

Be it enacted, &c., as follows :

SECT. 1. The one hundred and forty-ninth chapter of the acts of the year one thousand eight hundred and sixty-seven, entitled "An Act for the Re-stocking of Mystic River and its tributaries with Fish," is hereby amended by adding to the second section thereof the words following, viz.: "*provided*, that the several committees for the preservation of fish mentioned in the

fourth section may take such fish as may be required to re-stock the said river and tributaries;" and also, by adding to the fourth section after the word "Cambridge," the word "Woburn."

SECT. 2. Any person who shall place or cause to be placed in the waters of Mystic River or of its tributaries, or of Mystic Pond, or who shall cause to flow into said waters any substance which may destroy or injure the fish therein, shall be punished by a fine not exceeding fifty dollars for each offence. [*Approved April 16, 1868.*]

[Chap. 157.]

AN ACT for the Re-stocking of Ipswich River and its tributaries with Fish.
Be it enacted, &c., as follows:

SECT. 1. The right to take alewives or shad from Ipswich River or its tributaries, or from Wenham Pond, shall be and is hereby suspended for the period of three years next ensuing, and no net, seine or weir shall be set therein during said period.

SECT. 2. Any person violating the provisions of this statute shall forfeit one dollar for every alewife or shad so taken.

SECT. 3. All prosecutions under this act shall be commenced within thirty days from the time of committing the offence. [*Approved April 29, 1868.*]

[Chap. 289.]

AN ACT for the protection of Trout in the Merrill Pond in the Town of Wendell.

Be it enacted, &c., as follows:

SECT. 1. No person shall take any trout from the Merrill Pond, on the old Wendell town farm, in the town of Wendell, or the waters running into the same, at any time of the year, without permission of the proprietor or proprietors.

SECT. 2. Any person offending against the provisions of this act shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Franklin. [*Approved June 4, 1868.*]

[Chap. 290.]

AN ACT to protect Trout in Jones' Mill Creek in the Town of Barnstable.
Be it enacted, &c., as follows:

SECT. 1. No person shall take any trout in Jones' mill creek, in the town of Barnstable, from its source to the junction with Scorton creek, and within two hundred yards of said junction, on either side thereof, from the first day of August in each year, to the first day of April in the year next ensuing; nor shall any person take any trout therefrom except by hook and line; nor shall any person enter upon the land bordering upon said pond or stream, at any season of the year, for the purpose of taking trout, without the written permission of the proprietors.

SECT. 2. Any person offending against the provisions of this act, shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Barnstable.

SECT. 3. This act shall take effect upon its passage. [*Approved June 4, 1868.*]

[Chap. 130.]

AN ACT to regulate Fishing in Connecticut River.

Be it enacted, &c., as follows:

SECT. 1. Any person who shall take, or who shall aid or assist in taking from the Connecticut River any shad at any other time than between the fifteenth day of March and the fifteenth day of June in each year, shall forfeit and pay for each offence the sum of one hundred dollars.

SECT. 2. Any person who shall take, or aid or assist in taking from the Connecticut River any salmon before the fifteenth day of March, in the year one thousand eight hundred and seventy-two, shall forfeit and pay for each offence the sum of fifty dollars.

SECT. 3. Nothing in this act contained shall apply to the taking of any fish by order of the fish commissioners for the purpose of artificial or natural propagation of the same.

SECT. 4. The mayor and aldermen of any city, and the selectmen of any town, bordering on the Connecticut River, shall appoint and fix the compensation of one or more suitable persons as fish wardens within their respective cities and towns, who shall make complaint of all offences under this act. [Approved April 17, 1868.]

The above Act failed to fix any *days in the week* when fishing is *prohibited*. It therefore did not agree with the Connecticut law, which, in turn, became inoperative, and thus, by the carelessness of our legislators, Connecticut was left without *any fishery law at all*, because the laws of the two States were conditional one on the other.

The following is the Connecticut *conditional* law to which the earnest and early attention of our legislature is called:—

[Chap. 106.]

AN ACT in addition to an Act, passed May session, A. D. 1867, entitled, "An Act in addition to an Act for encouraging and regulating Fisheries."

Be it enacted &c.:

SECT. 1. No person shall set or draw, or shall assist in setting or drawing any net or seine for the purpose of taking fish, in any of the waters within the jurisdiction of this state, at any time between the setting of the sun on the evening of each Saturday, and the rising of the sun on the succeeding Monday morning; and the owners of all weirs, pounds and set-nets of any description, placed in any of the waters aforesaid, shall cause the same to be and remain open and free for the passage of fish at all times from the setting of the sun, upon the evening of each Saturday, to the rising of the sun upon the Monday succeeding, and the opening of any particular pound or weir in such manner as has been approved by the fish commissioners in the case of such particular pound or weir shall be a sufficient opening and sufficient freedom within the meaning of this section; and every person who shall violate

any provision of this section and every person owning or controlling, in whole or in part, any pound or weir, and who shall fail to comply with the requirements of this section, shall forfeit the sum of four hundred dollars to the treasurer of the state, for each offence.

SECT. 2. No person shall set or use or shall assist in setting or using any pound, weir or set-net at any time between the fifteenth day of March and the fifteenth day of June in each year, in any of the waters within the jurisdiction of this state, unless each of the meshes of said net is of as great an extent as five inches; and every pound or weir, set or used in any of the waters aforesaid, at any time between the fifteenth day of March and the fifteenth day of June in each year, any of whose meshes is less in extent than five inches, shall be confiscated to the state of Connecticut.

SECT. 3. Any person who shall violate any provision of the two preceding sections shall forfeit the sum of four hundred dollars to the treasury of the state for each offence.

SECT. 4. All the provisions of the third and fourth sections of the act to which this act is an addition are hereby extended and shall fully apply to this act, and all parts of acts heretofore passed which are inconsistent with this act are hereby repealed.

SECT. 5. The restrictions upon the size of the mesh, imposed by the second section of this act, shall not apply to the Thames river prior to the first day of May in each year, and said restrictions shall continue, with the penalties therein provided, from the first day of May to the first day of October of each year in said river at any and all points, in all creeks and coves on said river above or north of a line drawn across said Thames river by Jacobs Rock, so called.

SECT. 6. The provisions of this act shall not apply to the waters of this state that lie between the eastern boundary of the town of Guilford and Pond Point in the town of Milford.

SECT. 7. The limitation of the time of taking shad and salmon in the first and second sections of this act *shall not take place unless the legislature of Massachusetts at its next session shall prescribe the same limitations to the catching of shad and salmon in said river as are contained in said sections.* All parts of the act to which this act is in addition, inconsistent herewith, are hereby repealed. [*Approved July 31st, 1868.*]

Proposed draft of an Act to fulfil, on the part of Massachusetts, the conditions of the Act passed by the last Assembly of Connecticut. *This should be passed IMMEDIATELY.*

AN ACT to extend the provisions of Chapter one hundred and thirty of the Acts of eighteen hundred and sixty-eight, entitled "An Act to regulate Fishing in Connecticut River."

Be it enacted by the Senate and House of Representatives in General Court assembled, and by authority of the same, as follows:—

SECTION 1. Any person who shall take, or aid or assist in taking, from the Connecticut River any shad at any other time than between the fifteenth

day of March and the fifteenth day of June in each year, shall forfeit and pay for each offence the sum of one hundred dollars; and any person who shall take, or aid or assist in taking, from the Connecticut River any salmon before the fifteenth day of March, in the year one thousand eight hundred and seventy-two, shall forfeit and pay for each offence the sum of fifty dollars.

SECT. 2. Nothing in this act contained shall apply to the taking of any fish by order of the fish commissioners, for the purpose of the natural or artificial propagation of the same.

SECT. 3. No person shall set or draw, or shall assist or aid in setting or drawing, any net or seine for the purpose of taking fish in Connecticut River, at any time between the setting of the sun on Saturday evening of each week and the rising of the sun on the succeeding Monday morning; and the owners of all weirs, pounds and set-nets of any description, placed in the waters of said river, shall cause the same to be and remain open and free for the passage of fish during the said period in each week, in such manner as to satisfy the fish commissioners. And every person who shall violate the provisions of this section, and every person owning or controlling, in whole or in part, any pound or weir, and failing to comply with the requirements of this section shall forfeit and pay the sum of four hundred dollars to the treasurer of the state for each offence; and any person setting or using, or aiding or assisting in setting or using, any seine, weir or set-net in said Connecticut River, between the fifteenth day of March and the fifteenth day of June in each year, the meshes whereof are less than five inches in extent, shall also forfeit and pay the sum of four hundred dollars for each offence, and such seines, weirs and set-nets shall be forfeited to the state of Massachusetts.

SECT. 4. The mayor and aldermen of any city and the selectmen of any town bordering on the Connecticut River, shall appoint and fix the compensation of one or more suitable persons, as fish wardens within their respective cities and towns, who shall make complaint of all offences under this act.

SECT. 5. The one hundred and thirtieth chapter of the acts of eighteen sixty-eight is hereby repealed.

[C.]

DIGEST OF FISHERY ACTS.*

The Special Acts of 1868 and 1866 *follow* the General Acts of those years, while those of 1867 *precede* its General Acts.

[1868.—Chap. 110.]

1. Proprietors Grist Mill Pond, Wareham, control trout fishing therein.
2. Penalty for trespass, forfeit one dollar for each trout on prosecution before trial justices, Plymouth County. [April 10, 1868.]

[Chap. 123.]

1. Chap. 149, sect. 2, 1867, amended so that "committees for the preservation of fish" may take shad and alewives for re-stocking from Mystic R. and tributaries, though for other persons the right to take said fish is suspended five years, and section four of said act amended by adding the committee from Woburn to committees there mentioned.

2. Substances, injurious to fish, put or allowed to flow in above waters under penalty not more than fifty dollars. [April 16, 1868.]

[Chap. 130.]

1. Abettors and takers of shad in Conn. R., except between March 15 and June, \$100 each offence.

2. Abettors and takers of salmon in Conn. R. before March 15, 1872, each offence forfeit and pay \$50.

3. This act does not bear on fish commissioners.

4. Mayor and aldermen and selectmen of towns and cities along Conn. R. have power to appoint and pay fish wardens for their towns and cities to make complaint. [April 17, 1868. 1864, 62.]

[Chap. 157.]

1. Right to take alewives and shad in Ipswich R. and tributaries and in Wenham Pond suspended three years.

2. Penalty, \$1 every fish.

3. Prosecutions to be begun within thirty days. [April 29, 1868. G. S. 83.]

[Chap. 179.]

1. Catchers of smelt between Feb. 1 and May 1, each year, and at any time, if using anything but hooks and lines or hand-nets, forfeit 25 cts. each smelt on prosecution before competent authority. This does not apply to smelt caught in seines or nets, Taunton G't R., while fishing for herring or alewives.

2. Commissioners may take any kind of fish at any time to procure spawn.
3. Prosecutions must begin within thirty days. [May 4, 1868.]

[Chap. 289.]

1. Proprietors of Merrill Pond, in town of Wendell, and influent waters, all seasons of year, control trout fishing therein.
2. Penalty, \$1 each trout before trial justices, County of Franklin. [June 4, 1868.]

[Chap. 290.]

No trout can be taken in Jones' Mill Creek, town Barnstable, from source thereof to 200 yds. from its junction with Scorton Creek, between Aug. 1 and April 1; nor at any time but by written permission of proprietor.

2. Penalty, forfeit and pay \$1 each trout, trial justices, County Barnstable.
3. Effect on passage. [June 4, 1868.]

SPECIAL ACT OF 1868.

[Chap. 53.]

1. *Resolved*: Allowed, paid and appropriated from State treasury not above \$12,000, to be laid out by Comm., created by 1866, 238, for fishway at dam at Holyoke, Conn. R., according to 1866, 238.

[Chap. 1867, 149.*]

1. Right to take alewives and shad, Mystic R., tributaries and Mystic Pond suspended five years.
2. Penalty, \$1 each fish.
3. Prosecutions must begin within thirty days.
4. "Preservation Committees" from Medford, Somerville, W. Cambridge and Winchester, may remove nets, &c., during said period.

SPECIAL ACTS, 1867.

[Chap. 70.]

1. 83, G. S. 15, is hereby amended, inserting "inhabitant this State" after "fisherman," 3d line.
2. Effect on passage. [March 16, 1867.]

[Chap. 86.]

1. Taking trout prohibited, unless with written permit, in stream, East Head, Carver and Plymouth, from source to dam of G. P. Bowers, owners of that part of stream controlling: *provided*, they keep a fishway open for trout at dam.

2. Penalty, \$1 per trout; trial justices, Plymouth County. [March 23, 1867.]

[Chap. 200.]

1. W. R. Beebe, G. C. Scott, P. Balen, associates and successors, incorporated, island Pasque, town Gosnold, into P. Island Corporation, to build on

* Amended, 123, 1868.

said island, to live and raise fish, subject to powers, privileges and liabilities of such bodies. May close outlets to creeks to propagate black bass and trout.

2. Seining and other modes of taking fish but by hook and line, within 40 rods said island, penalty \$5 to 20, proper court.

3. Said corporation can hold, sell or mortgage real and personal estate to \$50,000, not less than \$25,000, shares each \$100: *provided*, no liabilities incurred till half stock paid in in cash. [May 2, 1867.

GENERAL ACTS, 1867.

[Chap. 289.]

1. Seine and other fishing, shad, salmon or alewives in Merrimack R. prohibited until 15th of April, 1871, with penalty of seine and \$5 for shad or alewife each, and \$50 each salmon. Fish Commissioners privileged for re-stocking any rivers. [G. S. 83.

2. No fishing within 400 yards of Merrimack fishways or trespass within; fine, \$50.

3. Fishways to be made over dams in tributaries. [1866, 238.

4. Mayor and aldermen and selectmen along Merrimack must appoint and pay fish wardens to enforce sections 1 and 2. [May 31, 1867.

[Chap. 344.]

1. Fish commissioners of Act 238, 1866, have the following additional duties: to inspect all dams where law orders fishways. If said ways are found unsuitable for passage of fishes, notification may be given for repair, written instructions being given as to time and manner of repair.

2. Persons and corporations refusing to repair, forfeit \$50 for each day's neglect or refusal to keep open or maintain a fishway, got on indictment in county where dam is, one-half going to informer, half to Commonwealth.

3. Appropriated and paid from Mass. treasury, sum not over \$10,000, to re-stock rivers with shad, salmon and alewives, and the ponds with black bass and other fish. [June 1, 1867.

[1866.—Chap. 187.]

1. Mayor and aldermen and selectmen of towns and cities can give three or more persons and associates right of corporation, with capital stock not less than \$1,000 nor more than \$5,000, for propagation of herrings and alewives in their waters. Corporations having privileges and restrictions laid down in 61 G. S. and in general legislation as to corporations. [G. S. 61, 83.

2. Said corporations can hold real estate to open sluiceways for above use.

3. Towns and cities, in their corporate capacity, may do as above, taking land as they would for highways.

4. Fisheries thus created may be leased for times not exceeding five years, and towns and cities may so lease fisheries now held by them.

5. Without leave of such corporations, as above, no persons can take her-
ring or alewives.

6. Penalty, foregoing sections, \$5 to \$50.

7. Prosecution within 30 days.

8. Rights under former laws not impaired by this, nor contracts nor private
security against trespass.

9. Effect on passage. [*April 25, 1866.*]

[Chap. 238.]

1. Governor and council can make two persons commissioners Merrimack
and Conn. R's five years unless removed. Governor fills vacancies.

2. Com. examine dams and decide how fishways shall be made, suitable
for the passage of salmon and shad up river at usual seasons.

3. Comm. having decided on above method of action shall state same to
New Hampshire Comm.

4. If said statement be approved by them, Mass. Comm., on expressed
approval, shall give all dam-owners a copy of plan for their dam, and file in
State Secretary's office affidavit that information has been given, and this
affidavit shall be full proof of the facts stated therein, and a copy of plans
shall be filed with affidavit.

5. If dam-owners consent to fishways according to plans, at their own
expense, Comm. may agree to this. When done, according to plans and
direction of Comm., the latter may certify the fact to State Secretary, and
these fishways shall, for 5 years, stand in lieu of fishways now ordered by
law. Owners, for 5 years from passage of act, shall keep in repair, satisfying
Comm., and if this be done, during 5 years, the liability of owners will be
suspended.

6. When said ways are done, Comm., in writing, shall certify times when
they must be open, changing times, if they like. Copy of this shall be served
on proprietors, and Comm's certificate is proof of fact.

7. Dam-owners, refusing or neglecting, 30 days after receipt of plan, are
liable for expense of ways made by Comm., to be recovered in action of con-
tract in name of Commonwealth, costs and 12 per cent. interest from demand
of Comm. for such expense.

8. Owners of property taken for above purpose, if not liable as above,
shall receive compensation on written application from Mass. Treas. through
Comm. Compensation decided by jury as in case of highways.

9. Dam-owners may, for five years, avoid all liability by paying Comm.
sum which latter deem just by contract, attested by Comm. and filed with
State Secretary.

10. Said Comm. may contract with Essex Company to build their dam at
Lawrence, paying not more than \$7,000, expenses beyond that sum to be paid
by Essex Company.

11. Compensation of Comm. shall be determined by governor and council.

12. Comm. may make or have made appliances facilitating passage of fish.

13. Comm. may delay making of fishways until they deem Connecticut
legislation sufficient to protect passage of fish through that State.

14. Appropriation, this Act, not more than \$7,000.

15. Penalty for neglect, etc., \$50 each day, recovered in county where dam is, one-half complainant, one-half Commonwealth. [May, 15, 1866.]

SPECIAL ACTS, 1866.

[Chap. 54.]

City of Taunton may sell right to take shad and alewives, Taunton G't R., by authority city council, instead of legal meeting prescribed by 2, 401 of 1855. [March 2, 1866.]

[Chap. 249.]

1. Takers of trout, in any waters, between September 20th and March 20th, and, within said time, buyers, sellers and holders thereof taken in this State, forfeit \$1 each trout.

2. Takers black bass State ponds, Dec. 1st to June 1st, or at any time unless by hook and line, forfeit \$2 to \$20 each offence; competent court.

3. Under this Act, sale, purchase or possession shall be evidence of capture in State on prosecution. [May 22, 1866.]

1866.—RESOLVES.

[Chap. 80.]

Whereas, Conn. R. once abounded in fish, now partially gone, and cause of this change is found in Enfield dam: therefore—

Resolved, That attention of Conn. legislature be called to the fact that fishways should be made in said dam, by State or people, as interest of both States demands.

Resolved, That a copy of these resolves be sent to Conn. governor for legislature. [May 18, 1866.]

[1865.—Chap. 47.]

Selectmen or committee *pro tem.* of the town Pembroke, regulating alewife fishing in Barker's R., may regulate closing of passage-ways above the weir, (for alewives' passage to Indian Ponds,) and, saving mill-owners' rights, may obstruct passages of said fish: *provided*, they deposit from first running of said fish, after April 10th each year, alive and sound, at least 2,000 of said fish in said ponds, that they may spawn there.

2. Alewives, above 2,000 deposited as above, disposed of by order of selectmen, any hour secular day, according to law.

3. While passages are thus closed, dam-owners exempt from existing penalties as to fishways, and this act shall not prejudice rights now enjoyed by town officers.

4. Conflicting acts are hereby repealed. [Feb. 27, 1865.]

[Chap. 53.]

1. Inhabitants town Plymouth may establish herring fishery town streams called Eel R. and Town Brook, and locate weirs.

2. They may grant, also, not more than 12 years passage of this act, the above powers to persons approved in town meetings.

3. After said 12 years, selectmen shall sell the same annually, town treasury.

4. Interference said fisheries, disturbance weirs, unlicensed taking fish, not above \$10 each offence.

5. Act gives nobody right to molest dams or property in and along said streams.

6. Effect on passage. [March 16, 1865.

[Chap. 85.]

Wellfleet selectmen may annual town meeting sell alewife fishery, said town not above ten years. [March 16, 1865.

[1865.—Chap. 183.]

1. Town Mattapoisett can improve Barlow's Pond, tributaries and sea outlet to raise and take herring, or alewives, and in every way protect and regulate such fisheries.

2. Inhabitants legal meeting called for this purpose may make by-laws and penalties: *provided*, they don't conflict with State laws.

3. Such by-laws, within 10 days of passage, posted by selectmen in two or more public places.

4. Violators such laws each offence not above \$20, on conviction.

5. Town liable for damages done in executing this Act, and if selectmen and damaged parties can't agree, superior court, Plymouth, shall appoint, on petition of damaged parties, three disinterested persons to award. Award of two of them shall be final: *provided*, the said petition be made within 3 years from damage. Such person may also have, if he likes, damages assessed.

6. If this Act shall prejudice the herring fishery at weirs in Hammond's R. in Mattapoisett and Rochester, to any sensible degree, indemnity shall be rendered to owners of said fishery, legislature deciding whether in fish or otherwise.

7. Effect on passage. [May 1, 1865.

[Chap. 219.*]

1. No fish shall be taken within 50 rods of any fishway made or to be made in dams of Medford, West Cambridge and Winchester, between April 1st and June 15th.

2. Penalty, 50 cents each fish.

3. Prosecutions within 30 days.

4. Effect on passage. [May 10, 1865.

[Chap. 253.]

2. Trying to catch fish Sunday, in any way, within State, under a penalty of \$50.00 each offence, on conviction.

3. Prosecute within 30 days. [May 16, 1868.

RESOLVES, 1865.

[Chap. 45.]

Resolved, Governor and council appoint two commissioners to cause observation to be made on Conn. and Merrimack R's. during May and June, the

height of water on crests of dams at Lowell, Lawrence and Holyoke, height and right of maintenance of flash-boards on said dams, and if they are uniformly maintained thereon during those months; also, extent of degree of discoloration in water below dams by discharge of dyestuffs and noxious matter from factories, and effect of same on water and fish; also, to find best mode for fishways and expense of same, and other facts in their idea useful.

Resolved, That said Comm. communicate with those of N. Hampshire and Vermont on subject of these resolutions; ascertain their dam legislation; whether they have fishways for salmon and shad, or power to maintain them or have them maintained.

Resolved, That Comm. find out supply of fish before any obstruction existed, and why they have become less numerous, and general information respecting subject.

Resolved, That Comm. report to Gov. before first December next.

Resolved, That liability of Essex Company to re-build fishway in their dam, Merrimack R., according to their charter and the prescription of county commissioners, be suspended until July 1st, 1866.

Resolved, Governor to send copy to governors Vermont and New Hampshire. [May 3, 1865.]

[1864.—Chap. 62.]

1. Meshes of seines shall not be less than $2\frac{1}{4}$ inches square, when new and dry, used in Mass. part of Conn. R. or below Holyoke dam, between May 1 and July 15.

2. Fine, \$10 to \$50, half to town and half to informer.

3. Effect on passage. [March 2, 1864.]

[Chap. 150.]

1. No trout shall be taken in Quashnet R., Marshpee Dist., from Sept. 15 to March 20.

2. Only owners can fish without written permit from Marshpee treasurer, specifying time and place. Nothing but hooks and lines shall ever be used.

3. Said district can, by vote in legal meeting with warrant to that effect, enact by-laws not conflicting with this Act, and income shall be to profit of the district.

4. Penalty under this Act and by-laws under it, \$20 each offence, trial justice, Barnstable County.

5. Receivers of trout known to be from said R. forfeit 50 cents each fish.

6. District at regular meetings may appoint two or more fish-wardens. Prosecution within a year.

7. Effect May 1, 1864. [April 13, 1864.]

[Chap. 234.]

1. Previous Acts regulating fish in Mystic R. shall extend to town of Winchester, its ponds and streams. Its fish committee may remove all obstructions during time fixed by law.

2. This Act shall not be construed to conflict "Act as to Pure Water in Charlestown" of March 28, 1861.

3. Effect on passage. [May 12, 1864.]

[Chap. 259.]

1. Seining prohibited, Mattapoisett Harbor and influent waters within line drawn from Strawberry Pt., easterly side of harbor, to most southerly side of Mattapoisett Neck, westerly side of harbor, without leave of Mattapoisett selectmen, penalty being \$20 each offence for complainant's use. [May 13, 1864.

[Chap. 273.]

1. No seines or nets, Marion Harbor or influent waters between Charles Neck Pt., west side, and Great Neck Point, east side, without leave of Marion selectmen.

2. Penalty on conviction, \$20 to \$50 each offence, town use. [May 13, 1864.

[1863.—Chap. 73.]

1. 1855, 401, as to shad and alewives in Taunton G't R. and Newmarket R. are extended to tributaries of latter in Middleborough and Lakeville.

2. Middleborough town wardens under 401, 1855, shall in person or by deputy guard against violation of above act from $1\frac{1}{2}$ mile below dam at Squawbetty Village up to Assawampscott Pond; expenses to be paid by said town, and other towns on Taunton G't R. shall yearly pay re-imbursement to said town, as follows: Fall River and Freetown \$10 each; Somerset, Dighton, Berkley, and Raynham \$20 each, and Taunton \$30, Middleborough to recover on action of contract.

3. Beating on ground, or other disturbance of fish between March 1 and June 10, contrary to 401, 1855, shall be under penalties of 11, 401, 1855, if done in above rivers.

4. Effect on passage. [March 12, 1863.

[Chap. 117.]

1. Yearly committees, Plymouth and Wareham, under 89, 1860, shall control alewife and shad fishing in Agawam and Half-Way Pond and influent waters until successors are appointed.

2. Takers of said fish, unless persons or agents authorized by said committees, under penalty \$5 to \$50 each offence, recovered as in section 7, above act.

3. Conflicting acts and parts of acts hereby repealed.

4. Effect on passage. [March 28, 1863.

[1862.—Chap. 202.]

Takers and catchers, Little Quitticus Pond, towns Lakeville and Rochester, within six years, \$1 each fish, any kind whatever. [April 30, 1862.

[1861.—Chap. 74.]

1. B. Bowerman, S. Gifford, and P. G. Moore and successors and associates hereby incorporated, Little Sipwiset Cranberry and Fishing Co. to drain and improve Little S. Meadow, town Falmouth, suiting meadow to cranberry culture, and pond in meadow to alewife fishery, as also river thence to Buzzard's Bay.

2. Company according to 68 G. S.

3. Persons obstructing pond or river, without leave of company, or seining or otherwise taking alewives within 50 rods of river's mouth in bay, or trying to take, \$20 each, company's benefit.

4. Effect on passage. [March 15, 1861.]

[Chap. 157.]

1. Act of Feb. 16th, 1789, as to destruction of fish in Mystic R., within Cambridge, Charlestown, and Medford, repealing previous acts, "and also act of Feb. 2, 1816, as to fishing in Woburn, shall extend to town of Winchester and its waters influent to Mystic R.

2. Fish committee, of Winchester, may be elected in March or April, yearly, and shall have powers same as the other towns.

3. Does not conflict with *Charlestown Pure Water Act*, March 28, 1861.

4. Effect on passage. [April 9, 1861.]

[1860.—Chap. 46.]

1. No taking of trout, Marshpee R. and influent waters from westerly side, as far as water flows, to a line E. and W. across Poppeneset Island, thence on same line E. to centre of boundary channel, between Barnstable and Marshpee, thence by said channel N. to a line drawn due E. from Quawker's R. (mouth) and thence by shore to Marshpee R., from Sept. 15 to March 20.

2. Except for proprietors, a written permit is necessary to fish in said waters, given by Marshpee treasurer, and specifying time and place. Only hooks and lines under any circumstances.

3. District in legal meetings may make by-laws not repugnant to this act, and has all income.

4. Penalty, act and by-laws, \$20 each offence.

5. Holders of trout known to have been taken contrary to this act, 50 cents each fish.

6. Parents, masters, and guardians are liable for such offences in minors.

7. District in regular meeting, having announced their object in the warrant, may lease its trout and herring fishery, for not above 20 years each lease, appointing, if they like, two or more fish-wardens. Prosecutions within one year.

8. 36, 1849, and 5, 186, 1853, and 105, 1859, are hereby repealed.

9. Effect after March 1 next. [Feb. 24, 1860.]

[Chap. 82.]

1. G. Winslow, J. D. Wilson and J. Crane, of Freetown, associates and successors, are hereby corporated into Assonet Fishing Company to carry on alewife culture and fishery in said river and bay and waters connected therewith, altering dams and making raceways, and doing what they like consistently with 44 R. S. and 68 G. S.

2. Persons without permission, taking, catching or hauling ashore any herring in said waters, \$3 if catch be less than 1 barrel, \$5, if more, per barrel.

3. Damage done by said company compensated as in case of highways.

4. This act does not authorize taking of property private without consent, nor does it interfere with existing fishing privileges, except as to herring, of people of Freetown.

5. Effect on passage. [March 17, 1860.]

[Chap. 89.]

1. Town of Plymouth, annual meeting, March or April, and Wareham annual meeting in November, each year, shall ballot for a committee, maximum 3 persons, sworn like other town officers; to report yearly in March, after a public notice of ten days at least, the sale, at public auction, of the right to take alewives and shad in Agawam and Half-Way Pond R's at places, not above 2, each town, and times, not more than 3 days a week, as said committee shall announce in notice, in which also manner of taking and price shall be specified, latter not above 25 cents per 100 for alewives or 4 cents each for shad, provided, that said committee may fix one place in Wareham and one day each week for shad, different from those for alewives.

2. Committees from these towns shall notify each other in alternate years forever, through town clerks, time and place of their meeting 10 days at least before the time of meeting, and present members form a quorum, the town of Plymouth beginning.

3. Neglect in choosing committees, or in giving notice, subjects the town so neglecting to \$100 each time.

4. Only purchasers and agents can fish in said rivers or waters therewith connected between April 1 and June 16, both inclusive, under penalty \$5 to \$50 each offence.

5. The dam-owners and occupiers on said rivers shall keep a fishway open from April 15 to June 15, under penalty of \$100, and the committee may open neglected dams at expense of owners: *provided*, no unnecessary damage be done.

6. Makers of weirs and obstructions, and seiners and takers acting contrary to committee's orders between April 15 and June 15, suffer penalty of \$5 to \$50 each offence, and committee may remove obstructions at expense of their maker, seize seines and complain to town treasurer of offences.

7. Treasurers of said towns, on complaint of said committees, shall sue for recovery of any forfeitures under act, or regulations under it, and fines and forfeitures, and proceeds of fishery and expenses of suits shall be divided between the towns; withholding dues punished by action on the case, by one-half amount.

8. Buyers of fish rights shall conform to the regulations of committees published as aforesaid; penalty \$5 to \$50.

9. Committee-man may be witness in such case.

10. Plymouth committee chosen last April, and Wareham committee of last November, as to alewives, under existing acts, shall present year act as committee under this act, and they and future committee-men under this act shall have \$1.25 each every day of service, from fishery proceeds.

11. Inconsistent legislation repealed. [March 20, 1860.]

[Chap. 91.]

1. N. and D. Sudder, W. Chipman, E. Sears, associates and successors, incorporated into 9 Mile Pond Fishing Co., to open way from 9 M. Pond and Long Pond to tide-water and keep it open, subject to powers and restrictions of 44 R. S. and 68 G. S.

2. Herring fishing their waters their property and trespass is liable to penalty of \$3 less than a barrel, and \$5 if more per barrel, action of tort in the name of corporation.

3. Private property not used without consent, and abutters on said waters may become members if they apply within 6 mos. after the organization of said company, and pay share of previous expenses.

4. Persons, not members, suffering damage by opening of canal or draining, may, if parties in interest fail to adjust, appeal to county commissioners, Barnstable, and appeal from them, to Barnstable superior court.

5. Corporation may hold \$2,000 in real estate over and above right of fishery above mentioned.

6. Capital stock \$1,000; shares \$10 each; with right of increase to \$3,000.

7. Existing privileges, said ponds, are not thus transcended, and the whole act is void if not approved by majority of voters present and voting in town meeting.

8. Effect on passage. [March 20, 1860.]

FISHING ACTS, GENERAL STATUTES, 1860.

[Chap. 83.]

1. Putting or throwing into waters of the State, to destroy fish, any *coculus indicus* (Indian berry or cockle,) or any poison, pure or mixed, under penalty \$10 each offence.

2. Takers of pickerel and trout in waters of State, unless by hook and line, and all takers of pickerel December 1 to May 1, under penalty \$1 each fish, guardians being liable for minors, but this section does not apply to towns not adopting, nor does it to Marshpee Statutes.

3. Prosecutions within 30 days.*

[1859.—Chap. 54.]

Section 3, chap. 195, 1837, is hereby amended by striking out the words "five dollars," and inserting, "\$1 each fish so taken." [Feb. 19, 1859.]

[Chap. 90.]

Rights, duties, benefits or privileges, held by Pembroke or Hanover, or both, under act of 1792, "as to alewives in Indian Head R. and Pond," are hereby extended to Hanson and Hanover. [March 7, 1859.]

[Chap. 105.]

1. 1, 36, 1849, is hereby amended so that no trout shall be taken in Marshpee R. from Sept. 15 to March 20.

2. 5, 186, 1853, is hereby amended so that Marshpee selectmen may lease trout and herring fishery of said district according to said section, not above 20 years at any one lease. [March 17, 1859.]

[Chap. 106.]

1, 30, 1857, is hereby amended by striking out "*provided*," and inserting, "that the provisions of said Act shall not extend to towns not adopting." [March 17, 1859.]

[1858.—Chap. 65.]

1. W. V. Baker *et al.* corporated Baker's Pond and Drain Fishing Co. in Yarmouth; can open outlet from Baker's Pond to Bass R. for alewife fishery, subject to 44 R. S.

* The other Fishing Acts, General Statutes, chap. 49, relate solely to the inspection of fish, specifying the quality of Nos. 1, 2 and 3 salmon and shad, &c. M. W.

2. Catching, without leave, said waters and within 100 yds. of Baker's Drain, penalty \$2 less than barrel, \$5 per barrel if more.

3. Effect one year from passage if town Yarmouth accepts. [*March 22, 1858.*

[Chap. 94.]

1. District Marshpee can in legal meeting, called for this, make and enforce by-laws as to pickerel and perch, hooks and lines, all seasons.

2. District may in legal meeting, if notice be given in warrant that subject will be acted upon, allow selectmen to let whole or part of both, or either, for not above one year, to any person, on terms of by-laws.

3. Takers of fish contrary to by-laws, under penalty \$1 to \$20; half to prosecution, half to district.

4. Inconsistent legislation hereby repealed. [*March 26, 1858.*

[Chap. 95.]

1850, 6, and 1855, 156, shall apply to all persons and any kind of net within prescribed limits.

[Chap. 130.]

1. Seines and nets shall not be used within half mile from mouth of any stream running from any Falmouth Pond into sea or Vineyard Sound between Nobsque Pt. and Waquoit Harbor, from March 20 to September 20 inclusive, each year.

2. Penalty, violation not above \$100 each offence.

3. Fines recovered on complaint of inhabitants of Falmouth; half to complainant, half to Commonwealth.

4. Inconsistent legislation hereby repealed. [*March 27, 1858.*

[1857.—Chap. 30.]

1. Pickerel and trout never to be caught unless by hook and line, and pickerel cannot be caught at all between December 1 and May 1. Penalty, \$1 each fish, Justice of the Peace; half to complainant, half to Commonwealth; but town meetings may suspend this act not above 1 year. [*March 25, 1857. 2 R. S. 55, 2.*

[Chap. 85.]

3. Sections in relation to menhaden, Duxbury, Plymouth, and Kingston. [*April 24.*

[Chap. 87.]

1. B. Norton, D. Norton, E. T. Smith, associates and successors, corporated into the "Lagoon Pond Co.," in Dukes Co., and can build a dam across said pond about or from part called Long Pt., to fish for herring and perch: *provided*, that all persons may fish in said pond with hook and line, and spear eels and dig clams.

2. Dam to be made within 2 years passage of act wide and strong enough, and with good bridge enough, to serve as a public highway.

3. Dam shall not injure by height meadows near by, or injure any existing rights.

4. For above purpose the company shall be clothed with powers and liabilities of corporations.

5. Taking, without leave, fish from said pond, except as provided in this act, under penalty of \$20. [*April 24, 1857.*

[1856.—Chap. 14.]

1. People of Ipswich, Essex county, between April 1 and June 1, Sundays excepted, may take alewives from Ipswich R. in dip nets, but at no other time.

2. Between April 1 and June 1, the using of seines or drag-nets is forbidden in said R. Penalty \$150, one-half to complainant.

3. Inconsistent legislation repealed.

4. Effect from passage. [*Feb.* 13, 1856.]

[Chap. 45.]

1. Pocha Pond Meadow and Fishing Company, Edgartown, Dukes Co., successors and assigns, given exclusive right to take, by seines, nets, etc., between March 1 and July 1, herring from Pocha and Capepoge ponds or tributary waters.

2. Using nets, taking, or trying to take herrings in said waters without consent of said company under penalty of \$20 each offence, and an additional sum of \$20 each and every barrel so taken to company.

3. Hindering herring on passage in pond or outlet, \$100 each offence to company.

4. Recoveries in action for debt.

5. Shares to the number of 16.

6. Inconsistent legislation repealed.

7. Effect on passage. [*March* 11, 1856.]

[Chap. 50.]

1. Mayor and aldermen and selectmen along tide-waters can authorize building of fish weirs in said waters, within town or city limits, for not above 5 years, provided such weirs shall not interfere with navigation.

2. Wilful injury or destruction of such weirs, or unlawful capture of fish therein, under penalty not above \$20 and liability to damage in civil suit.

3. Effect on passage. [*March* 15, 1856.]

[Chap. 52.]

1. No seines or drag-nets, Ipswich R., Hamilton, Wenham, Topsfield, Boxford and Middleton.

2. Each offence \$100; half complainant, half Commonwealth.

3. Effect on passage. [*March* 15, 1856.]

[Chap. 83.]

1. Mill-dam owners, Barker's R. may, obeying fish committee of Pembroke, make fishways in dams for alewives up said R. to Indian Ponds in Pembroke and Hanson. Dam-owners shall build and repair at their own expense, and open them from April 10 to May 15 inclusive, each year.

2. In case of neglect and refusal, waste-ways of dams shall be closed, according to act of May 19, 1853.

3. Pembroke fish committee shall control the flow of water over the dams in Barker's R. and said ponds for convenience of alewives.

4. Inconsistent legislation repealed.
5. Effect on passage. [April 3, 1856.

[Chap. 176.]

1. Seining, except for blue-fish, prohibited in Buzzard's Bay and tributaries, Sandwich and Wareham.
2. Penalty not above \$50, half to complainant. [May 24, 1856.

[Chap. 211.]

1. B. Norton, B. Davis, and O. E. Norton, associates, successors, and assigns, are corporated "Farm Pond Fishing Co., Edgartown, Dukes Co.," can close outlet and make another where they like in their own grounds to create herring fishing.
2. With seines and nets or otherwise can take herring, pond and outlet, according to vote of proprietors.
3. Taking, or attempting, without leave, \$10 each offence said company, and \$10 more each barrel: *provided*, other fish may be taken.
4. Present owners of land along pond or outlet have but one share each, and can create no more, but may divide their shares.
5. Existing rights untouched. [May 30, 1856.

[Chap. 214.]

1. No seining or dragging nets within one mile of south side of Barnstable and District Marshpee, between Points Succanesset and Gammon, from April 1 to Nov. 1, each year.
2. 16, 55 R. S. as to shell-fish in town of Chatham, extended to above places.
3. Violations, \$20 to \$100, with costs, in action of tort by any inhabitant.
4. Boats, craft or seines unlawfully used may be detained, not above 48 hours, to attach, for security by due process of law, with costs, by any inhabitant; to be discharged on payment of highest penalty for boat or craft, and lowest for a seine.
5. Forfeitures, half complainant, other half to town or district, according to complainant's residence.
6. *Bona fide* seining for mackerel and menhaden not meddled with.
7. Effect on passage. [May 30, 1856.

[Chap. 225.]

Town Orleans, legal town meeting, may enact laws to regulate the fisheries of Pleasant Bay and inlets within limits of town. Above laws shall not infringe on Mass. laws. [May 31, 1856.

[Chap. 248.]

1. Boats, vessels or nets may be taken from those using them in violation of laws protecting Ipswich R. by constables, and kept till lowest fine be paid, or bond be given.
2. Effect on passage. [June 3, 1856.

[Chap. 285.]

1. Use of nets or seines within one mile of shore within town of Edgartown, except in Oyster Pond, from April 1 to October 1 inclusive, each year, prohibited, and only inhabitants can use them at any time. Seining of mackerel and menhaden is exempted.

2. Violation not above \$300 each offence, and boats, &c., may be seized, not above 48 hours, by appointee of town Edgartown.

3. Edgartown can choose at town meeting proper number of fish-wardens, sworn to duty, to prosecute under act, half penalty going to them, half to Commonwealth.

4. Recoveries made in competent court.

5. Effect on passage. [June 6, 1856.]

[Chap. 289.]

1. Essex Company before Feb. 1, 1857, shall make and forever maintain in their Lawrence dam, free passage fishway during April, May, June, September and October, each year, under penalty \$100 to \$500 each day of neglect after said Feb. 1, half complainant, half Commonwealth.

2. No spearing, netting or seining months aforesaid within eighty rods of a dam or fishway entrance.

3. Offences under 2 under penalty not above \$100, half to complainant, half to Commonwealth.

4. Inconsistent legislation repealed. [June 6, 1856.]

[RESOLVES.—Chap. 58.]

That governor and council may appoint 3 commissioners to ascertain and report, next session general court, as to artificial breeding of fish, and introduction of same into this Commonwealth under law; to keep account of their expenses, to be audited and allowed by Gov. and Coun., and paid by warrant of Gov. from treasury: *provided* it does not exceed \$1,000. [May 16, 1856.]

[1855.—Chap. 39.]

1. Inhabitants Brewster can prohibit obstructions to alewives and catching the same by persons not authorized the town within $\frac{1}{4}$ mile east of the mouth of Mill Creek, or outlet of Stony Brook, in Brewster Bay, and on west of said boundary to line of town Dennis, from April 20 to June 20: *provided*, such prohibition shall not affect other fish.

2. Penalty, each offence not above \$20.

3. Effect on passage. [March 9, 1855.]

[Chap. 51.]

1. A. Paine and T. Jarvis can make fish-weirs on their land in Brewster: *provided*, said weirs, etc., be not within $\frac{1}{4}$ mile of Stony Brook.

2. Penalty, taking fish without their permission not above \$15 each offence.

3. Effect on passage. [March 14, 1855.]

[Chap. 75.]

1. Young of Chatham can make a fish-weir on north side of new harbor, flats near Nauset beach, in Chatham, Barnstable: *provided*, such weir injures no rights of others.

2. Trespassing or damaging, \$20 penalty.
3. Effect on passage. [March 24, 1855.]

[Chap. 84.]

1. H. L. Eldridge and associates are authorized to make fish-weirs, etc., in tide-waters junction of channel running south from Broad Creek and Crooked Channel in south-east part of Orleans, to take fish: *provided*, said weir does not obstruct navigation or interfere with the rights of others.

2. Injuring weir and taking fish without leave, penalty \$20.
3. Effect on passage. [March 24, 1855.]

[Chap. 88.]

1. T. Sparrow and associates in Chatham can make a fish-weir from west shore of Monomoy beach, south side of Steward's Hole and extend same not above 800 yds. west into Chatham Bay, county Barnstable, with all privileges: *provided*, said weir does not interfere with navigation or others' rights.

2. Injury to weir or fishing without leave, penalty not above \$20.
3. Effect on passage. [March 26, 1855.]

[Chap. 90.]

1. B. W. Eldridge, F. Joseph, C. Perry and associates may make fish-weir near Kilt Pond Point south shore of Dennis: *provided*, no injury to existing rights.

2. Obstructions and illegal capture, penalty \$20.
3. Effect on passage. [March 26, 1855.]

[Chap. 125.]

1. I. Wixon and S. Whittemore can make a fish-weir near Hill Pond Point, in Dennis: *provided*, no prejudice to existing rights.

2. Penalty, \$20.
3. Effect on passage. [March 31, 1855.]

[Chap. 154.]

1. E. Rogers, Jr., and associates can make a fish-weir near mouth of Crooked Channel and its junction with Little Bay, to take fish: *provided*, no prejudice to existing rights.

2. Penalty, \$20.
3. Effect on passage. [April 9, 1855.]

[Chap. 156.]

1. Penalty of 3d section, Feb. 5, 1853, amended to not above \$500, for use of town of Nantucket.

2. Effect on passage. [April 9, 1855.]

[Chap. 162.]

1. J. Tuttle and associates may make fish-weir in Harwich, on flats east of Andrews R., S. Harwich, so called: *provided*, no prejudice to existing rights.

2. Penalty, \$20 each offence, for use of the prosecutor.
3. Effect on passage. [April 10, 1855.]

[Chap. 171.]

1. Inhabitants Ipswich and vicinity, Essex County, may use dip-nets in Ipswich R., except on Sundays.
2. Use of seines and drag-nets in Ipswich town, Ipswich, under penalty not above \$50.
3. Effect on passage. [April 10, 1855.]

[Chap. 173.]

1. Fish-weir rights given to W. W. Eldridge, J. Eldridge and W. N. Rogers in tide-waters near Clam Pt.: *provided*, no prejudice to existing rights.
2. Penalty, \$20.
3. Effect on passage. [April 10, 1855.]

[Chap. 175.]

1. No seining in Apponigansett R., in Dartmouth, or tributaries, north of line running south-west from Ricketson's Pt., across said river.
2. Penalty, \$15 to \$50, use of town.
3. Effect on passage. [April 14, 1855.]

[Chap. 208.]

1. Inhabitants of Danvers, Beverly and vicinity, Essex County, may always take fish from Porter's, Crane and Waters' R's, within the towns above named.
2. Taking in said rivers with seines or nets, penalty not above \$50, one-half to town where offence is, one-half to prosecutor.
3. Anybody may take fish in any manner whatever below Horse Pasture Point, west side Bass R., and near or below the mouths of rivers named in first section.
4. Effect on passage. [April 18, 1855.]

[Chap. 212.]

1. Fish-weir privilege, G. Weaver and associates, tide-waters, Yarmouth, Lewis Bay, with usual *proviso* as to existing rights.
2. Penalty, \$20 each offence, benefit of prosecutor.
3. Effect on passage. [April 18, 1855.]

[Chap. 272.]

1. A. Mayhew, G. Mayhew and associates must build a good fishway, both for ingress and egress through creek leading to Squipnocket Pond, Town of Chilmark, Dukes County, during usual season.
2. Obstructions, \$20 each offence, for use of prosecutor.
3. Effect on passage. [May 2, 1855.]

[Chap. 279.]

1. Selectmen Yarmouth and successors may permit seines at discretion, permits in writing, between December 1 to April 1, each year, in following ponds, viz.: "Bowman's Pond," "Little Pond," and "Perch Pond."
2. Using seines without permission of selectmen, penalty \$5 to \$100 each offence, one-half to complainant, one-half to town.

3. Selectmen shall regulate disposition of fish from said ponds, securing to inhabitants a part.

4. Inconsistent legislation repealed.

5. Effect on passage. [May 2, 1855.]

[Chap. 299.]

1. Owners Trap's Creek Fishing Company, Edgartown, Dukes County, associates and successors, can take all kinds of fish, by seine or otherwise, in Trap's Pond, from April 1 to November 1, each year.

2. Using seines without their consent, \$20 each offence, and \$10 in addition each barrel of perch, recovered by indictment.

3. No person whatever can seine perch from April 1 to November 1.

4. All inhabitants of Commonwealth can use hooks and lines at any time.

5. Inconsistent legislation repealed.

6. Effect on passage. [May 4, 1855.]

[Chap. 301.]

1. O. Brooks, Jr., associates and successors, Town of Harwich, can remove obstructions in Coy's Brook, from the branch of Herring R., near Hall's Island, to Clark's Pond and Flax Pond, to propagate and catch herring or alewives for their own benefit: *provided*, no prejudice to existing rights.

2. Obstructions and illegal capture, \$2 to \$20 each offence.

3. Effect on passage. [May 4, 1855.]

[Chap. 319.]

1. W. Eames, of Marshfield, authorized to propagate herring or alewives in his pond, and to make fishways from said pond to Cove Creek, having right to catch in said creek, within forty rods below dam in said pond: *provided*, said distance does not extend on said stream below its junction with stream from Carver's grist mill.

2. Taking without his consent, or obstructing, penalty \$10, benefit of Eames.

3. Inconsistent legislation repealed.

4. Effect on passage, and for twenty years. [May 7, 1855.]

[Chap. 324.]

1. W. Gifford, S. Dillingham, associates and successors, Falmouth, Oyster Pond R. Company, authorized to regulate river running from Oyster Pond to Hogg Island Harbor, for alewife fishery, *preserving* individual rights.

2. Unlawful taking, \$2 to \$20, use of prosecutor.

3. Effect on passage. [May 10, 1855.]

[Chap. 337.]

1. Nantucket town-meetings can make expedient by-laws for ponds and creeks within the said town, *preserving* private rights.

2. Effect on passage. [May 15, 1855.]

[Chap. 401.]

1. From passage of this act no person can, in any way, catch shad or alewives in Taunton G't R. and Newmasket R., from March 1 to June 10, both inclusive, except as hereinafter provided.

2. Cities and towns hereafter named shall yearly, in meeting held before the 15th of November sell, public auction, buyer giving bond for payment, the privilege of taking shad and alewives between said days inclusive next year, with seines, as follows: Fall River and Freetown, each to sell a one-seine privilege; Somerset, Dighton, Berkley and Raynham, each a two-seine privilege; Taunton, a three-seine privilege, all being sold separately, and purchasers locating themselves anywhere on said river with consent of the owners along the shore.

3. Seines used in Taunton and Raynham and in Dighton and Berkley, above Rocky Pt., not above 35 rods, and in Somerset, Freetown and Fall River, not above 40 rods; none of said fish to be taken within $1\frac{1}{2}$ miles of dam, near King's Bridge, near Squawbetty Village.

4. Seines to be in water only while casting and hauling and nothing to hinder fish going up, must be put in river below Squawbetty Village, within time hereinafter mentioned. Locations to be designated by signals above and below, unchanged during season, all being 40 rods above Rocky Pt. and 45 below Rocky Pt. No seining without the compass of two parallels, 1 p't 10 rods above upper limit, and the other from p't 10 rods below lower limit of all locations above Rocky Pt., and at right angles with a line drawn from such upper and lower limits or without the compass of two parallel lines, 1 from p't 30 rods above upper limit and other from p't 30 rods below Rocky Pt., and at right angles with line between such upper and lower limits; all such distances being measured on bank of said river. Seines not to be swept above 50 rods said p't and 75 rods below said p't at any one sweep.

5. No taking, said rivers, between 9 o'clock Friday evening and 4 o'clock Monday morning, March 1 to June 10, both inclusive, nor above Berkley and Dighton Bridge between 12 Thursday night and 4 Monday morning, within said time.

6. Purchasers of fishing privileges shall select their locations for fishing, and file a certificate thereof, town clerk's office, before March 1 each year.

7. The wardens of section 9 may seize boats, tackle, etc., used in violation of this act, in any waters of said vicinage, except Broad Cove.

8. The fisheries in Newmasket R. shall be entirely under the control of Middleborough and Lakeville, to use or sell as they may decide in legal meetings, but only to be used between the hours of 4 A. M. on Monday to 9 P. M. on Friday, and only at times and places prescribed in section 1. Net proceeds to be divided between said towns according to ratable polls.

9. Town-meetings and mayor and aldermen shall choose by ballot in March or April, 3 or more persons for fish wardens to be sworn within 10 days of election. Their neglect, under penalty, \$10, as to said oath and towns not choosing, shall pay \$100, action of tort, use of prosecutor.

10. Dam and mill owners at King's Bridge, Squawbetty Village, and all other similar owners shall keep open suitable fishways within time of section 1: *provided*, that it shall not be necessary to maintain such way before noti-

fication in spring. Penalty, \$20, use of prosecuting fish warden, action of tort.

11. All violations of this act, under penalty, \$5 to \$50, action of tort in any competent court to the use of the prosecutor or on complaint and conviction before any proper justice of the peace not above \$20, and imprisonment not above 60 days. And in any suit or complaint instituted under this section, there shall be a right of appeal to the court of common pleas.

12. Effect on passage, inconsistent acts repealed. [May 19, 1855.]

[1854.—Chap. 231.]

1. Grant to Isaac Keith, heirs and assigns, exclusive right of taking fish in Scusset R., leading into W. Sandwich mill-pond, *only* on Monday, Wednesday, Friday and Saturday: *provided*, grantees keep open ways in dams to allow fish to go into mill-pond to spawn.

2. Taking without grantee's leave, each offence, \$10, one-half to complainant, one-half to grantee. [April 7, 1854.]

[Chap. 285.]

1. Herring Pond tribe Indians, can fish on W. bank of Herring R. in Sandwich, in their ancient ways, above weir on said river to land of heirs of N. B. Gibbs, dec'd, on days prescribed by selectmen as by act of March 27, 1834, and shall also receive annually from town Sandwich, 2 bbls. each family.

2. Effect on passage. [April 12, 1854.]

[Chap. 53.]

1. C. S. Nye, J. Witherell, C. O. Nye, of N. Yarmouth, associates and successors, corporated into Magonsett Fishing Co., and can regulate brook from Dam Pond to Wild Harbor, so far as necessary for alewife fishery with privileges and liabilities of 44 R. S.

2. Catching within one-eighth mile mouth of said brook, \$2 if less than one barrel; if more, \$5.

3. Injured individuals, remedy against corporation as in case of highways.

4. Effect on passage. [March 17, 1853.]

[Chap. 95, 1834, 126.]

1. Takers of fish in Herring R. or the spawning ponds thereto attached, at times not allowed by selectmen, penalty \$1 to \$20 each offence, or imprisonment not above 60 days in county jail. [March 26, 1853. N. B. 1854, 285.]

[Chap. 350. Sp. Laws, vol. 1, p. 269; 1814, 218; 1848, 116; 1852, 66.]

1. Inhabitants Pembroke can take at usual weir on North R. or stream to Indian Ponds, following days each week: Tuesday, Wednesday, Thursday, and Friday, sunrise Tuesday, sunset Friday inclusive, these times only; penalty, \$50 each day of violation, one-fourth to complainant, three-fourths to towns Marshfield, Scituate, and S. Scituate, in proportion to inhabitants by last census.

2. Taking fish, stream from North R. to said Indian Ponds, or tributaries except at weir, between April 10 and May 15, inclusive ; penalty, \$20 each offence, one-half to complainant, one-half to town of Pembroke.

3. Inhabitants from towns on said river may take with ten seines only, as follows : Pembroke, Scituate, and S. Scituate, selling at auction, own benefit, each a two-seine privilege, and Marshfield a four-seine privilege.

4. Taking unauthorized by this act ; penalty, \$20 each trespass for town where offence is.

5. Mill-owners, North R., and streams running thence to Indian Pond, shall take up waste-ways of said mills on or before April 10, and keep up till May 15, that fish be not obstructed, neglect or failure, penalty \$100 each day of neglect, going to towns Marshfield, Pembroke, Scituate, and S. Scituate.

6. Expenses of removing obstructions in streams between North R. and Indian Ponds shall be borne by said towns in proportion to the number of their inhabitants, who can raise money for the same.

7. Penalties, competent courts.

8. Inconsistent legislation repealed.

9. Effect on passage. [*May* 19, 1853. 1856, 83.]

[Chap. 377. 1838, 19; 1844, 65.]

1. Seines and drag-nets forbidden in Agawam and Half-Way Pond Rivers, March 1 to October 1, penalty to Plymouth and Wareham, \$20 each offence.

2. Forfeitures to be collected and disposed of, same way as forfeitures under act of Feb. 26, 1838.

3. Annual conventions Plymouth and Wareham, failing by neglect or disagreement, to prescribe time and manner for opening fishways in dams on said rivers, then either committee feeling aggrieved on application Plymouth County commissioners, who shall then have same powers as original committee, and shall then fix time and manner, penalties being same as those now existing, and shall have power to open dam, if necessary. If either of the county commissioners shall live in Plymouth or Wareham, his place shall be supplied by one of special commissioners who is a non-resident.

4. Inconsistent acts repealed.

5. Effect on passage. [*May* 25, 1853.]

[1852.—Chap. 35.]

1. Seines prohibited in Osterville Harbor, or Poponesset Bay, or any waters in town Barnstable or Marshpee district, southerly side ; penalty, \$10 to \$100, one-half to town use, one half to prosecutor.

2. Effect on passage. [*March* 15, 1852.]

[Chap. 48. Sp. Laws, vol. 2, p. 504; vol. 3, p. 398; 1823, 97; 1848, 87.]

1. City council, Lynn, to choose each April or May five citizens to see to enforcement of laws as to fishways of shad and alewives, each to be sworn. Majority said five to fix time, place, and manner of catching in Saugus R. and city streams ; *provided*, no one takes above three days a week, and prohibitions be not above four days a week. Regulations to be posted in three public places, or published in newspaper.

2. Majority can oblige dam and sluice-head owners to maintain fishways between April 1 and June 20, and canal owners to keep enough water in canals, and on neglect or refusal may open and maintain at expense of delinquent, to be kept as long as they desire. Obstructing and injuring fish; penalty, \$20 each offence.

3. Taking, against this act, \$1 to \$10 each offence.

4. Non-resident capturers not above \$20 each offence.

5. Committee to see to execution, and may enter bordering lands. Molesting them, \$1 to \$10.

6. Fines, police court, use of city.

7. Inconsistent acts repealed.

8. Effect on passage. [March 26, 1852.]

[Chap. 66. Sp. Laws, vol. 1, p. 260. 1814, 128; 1848, 116.]

1. No mesh nets North R., Plymouth Co., except between sunrise to sunset on Monday, Wednesday, and Friday.

2. Seine laws apply to mesh nets. 1853, 350; 1856, 83. [March 27, 1852.]

[Chap. 68.]

1. J. Howes, W. Crowell, 2d, J. Gorham, associates and successors, Flax Pond Fishing Co. Dennis can open brook from Sesuit creek, improving said creek to the sea, for alewife fishery, powers and liabilities of 44 R. S.

2. Catching illegally, said waters, \$2, use of Howes, etc., if less than bbl.; \$5 each bbl. if more than bbl.

3. Damages of company to individual property indemnified.

4. All inhabitants Dennis may be members, if they apply within three mos. from passage, and pay their proportion of accrued expenses.

5. If company do not improve powers within three years, act will be void.

6. Effect on passage. [March 27, 1852.]

[Chap. 92. Sp. Laws, vol. 3, 378; 1819, 11; 1820, 51; 1836, 130; 1837, 184; 1844, 63.]

1. From passage, no taking shad or alewives with seines or nets, Palmer's R., Rehoboth, Bristol Co., from April 1 to July 1: *provided*, people of Rehoboth may at legal meeting dispose at auction, highest bidder, scoop-net and seine privilege for any one year, on sufficient security being given.

2. Town may sell privilege in sections, or otherwise, and purchasers and agents may take between Swanzey line and Orleans dam, three nights a week, from sunset, Wednesday, to sunrise, Saturday, and with not above two seines same time, day time only, three days each week, Thursday, sunrise, to Saturday, sunset, between Swanzey line and Miller's Bridge: *provided*, no shad or alewives be taken after July 1.

3. Rehoboth town-meeting, March or April, may choose fish wardens, sworn to see to execution and prosecute violations, removing obstructions to fish between April 1 and July 1, entering lands, if necessary, as may lawful catchers and buyers: *provided*, they obey all regulations by fish-wardens, as to time and manner, and do no damage. Molesting fish-wardens and persons authorized by them, not above \$20 each offence, recovered as in next section.

4. Unlawful fishing and obstructing, \$20 each offence, use of county

where offence was, or by action of debt, half to complainant, half to town where offence is.

5. Inconsistent laws repealed.

6. Effect on passage. [April 3, 1852.

[Chap. 159.]

1. J. Nickerson and E. Nickerson, Provincetown, Barnstable, fish-wier, flats, side of Long Pt., Provincetown Harbor, adjoining uplands of grantees, extending same to ebbing point.

2. Taking without their leave, \$5 less than 100 lbs., and \$5 every 100 lbs.

3. Injured persons entitled to damage, as in highways. [April 27, 1852.

[Chap. 151.]

1. Selectmen and successors, Scituate and Cohasset empowered to regulate alewife fishing in stream from Scituate Pond to Cohasset Harbor, near town boundaries, annually disposing of said fisheries one year only, proper notice, public sale, improving and removing obstructions at expense of said towns equally, proceeds going equally said towns.

2. Acts of their majority shall be valid, if reasonable notice be given, and at least one man present from each town.

3. Illegal taking, said stream above Doane's Mill, \$10 each offence, benefit of purchasers of privilege, action at law.

4. Dam-owners to open dams according to orders of selectmen, between March 1 and June 1; failure, \$100 each offence, dam being open and kept open, owners' expense, *but* no unnecessary expense shall be incurred.

5. Selectmen may be witnesses.

6. Selectmen to regulate time, place, and manner of taking, *but* no fish shall be taken on above four days a week, and non-observance of rules by purchasers shall be under penalty of \$20 to \$100 each offence.

7. Said selectmen each to receive \$1.25 out of fishery proceeds each day of actual service.

8. Fines divided between said towns which can also join in suit.

9. Effect on passage. [April 27, 1852.

[Chap. 225.*]

5. Alewife fisheries Mattapoisett R. and town mills remain property of all inhabitants of Rochester and Marion, alewives to be sold to all families at price determined as majority of legal voters of both towns shall determine. Net proceeds applied to liquidate debt incurred for fishery, and, after such liquidation, to be paid according to number of inhabitants in each town. All fishery matters to be in hands of three inspectors chosen yearly, two from Rochester, one from Marion. [May 14, 1852.

[1851.—Chap. 77. 1826, 54.]

1. Seines, weirs, drag-nets, G't Pond, or connected waters, Edgartown, March 1 to Sept. 1, each year, \$50 for each offence, half to town, half to prosecutor.

2. Effect on passage. [April 25, 1851.

* This Act sets off a part of Rochester as the town of Marion.

[Chap. 98. Special Laws, 222, 289, Vol. 2. 1825, 63.]

1. Seines or drag-nets, Waquoit Bay and Falmouth waters, \$20 to \$100, half to use of town, half to prosecutor.
2. Effect on passage. [April 30, 1851.

[Chap. 116. 1843, 20.]

1. People of Barnstable, Feb. meeting, to choose Herring R. Alewife Committee, to fix place and time not above five days a week when all the inhabitants may fish, having, in addition, all powers given to selectmen by 1843, 20.

2. Time of such taking, and for dam-owners to keep their fishways open not above 30 days each year, *and* individual legal rights are saved harmless.

3. Sections 3 and 5 of 1843, 20, repealed. [May 7, 1851.

[Chap. 126.]

1. Damage done by Pocha Pond Fishing Co. paid by said company according to assessment as in highways.

2. Section 4 of April 25, 1848, is hereby repealed.

3. Effect on passage. [May 7, 1851.

[1850.—Chap. 6. 1833, 211.]

1. After July 1, 1850, seining shall be unlawful within one mile shores of Nantucket, Tuckernuck, Smith's, Muskeekit, and Gravel Islands.

2. Provisions of 16, 55 R. S. as to Chatham, extended to Nantucket.

3. Violation this act, \$50 each offence.

4. Nantucket fish-wardens, at duly notified meeting, may be chosen to be sworn to do their duty and to prosecute under this act.

5. Boats or crafts found within said limits, fish on board taken within said limits, shall be seized by fish-wardens and detained not above 48 hours, that they may be attached or arrested by due process at law, for security of penalty and costs: *provided*, the boats, etc., may be released on payment of the sum of penalty.

6. Fines, half to treasurer of Nantucket, half to complainant. Fines and costs in action of debt. [Feb. 5, 1850.

[1855, 156; 1858, 95. Chap. 73.]

1. J. B. Crocker, C. Marston, associates and successors, incorporated into G't Marsh Dyking, Water Power and Fishing Co., 44 R. S.

4. They have exclusive ownership of fishery created by their dike, and can regulate it and take fish to their use. [March 14, 1850.

[Chap. 99.]

1. C. Weeks, associates and successors, land owners near pond in south of Chilmark, incorporated Wequabsqua Fishing Co., to take fish within limits hereafter specified, according to 44 R. S. of Nov. 4th, 1855.

2. All such land-owners may become members, and share in proportion to estimated value of their several meadows according to valuation of commissioners of sewers, 1848.

3. They can open a canal across neck of land called Wequabsqua to the sea, with exclusive control of fishery in such canal, and so much of pond as lies within 10 rods of head of said creek and sea or ocean within 50 rods of mouth of said creek.

4. Unauthorized catching said limits, penalty, each offence, \$5 to \$20, half complainant, half to town of Chilmark.

5. Notification first meeting to be published in "Vineyard Gazette."

6. Effect on passage. [March 20, 1850.

[Chap. 148. 1815, 83; 1824, 107; 1837, 135.]

1. Act of Feb. 24, 1825, so far as it prevents the catching of alewives to the west of Job Chase's wharf, is hereby repealed.

2. Effect on passage. [April 4, 1850.

[1849.—Chap. 36.]

1. No trout to be taken in Marshpee R., Barnstable Co., Sept. 15 to April 1, each year.

2. Only proprietors can take at any time without written order from the treasurer of Marshpee, fixing time and place of taking. Only hooks and lines shall ever be used.

3. Legal meetings, Marshpee district, may make by-laws, not conflicting with existing laws, and income of fishing shall go to district.

4. Offences, act or by-laws, \$5 each offence, and proprietors may be witnesses in trials on such process.

5. Possessing trout known to be taken contrary to this Act, 50 cents each fish.

6. Guardians liable for minors.

7. Prosecutions within 60 days.

8. Effect on passage. [March 16, 1849. 1853, 186; 1859, 105.

[Chap. 37. 1814, 134; 1815, 83; 1837, 135.]

1. Dennis and Yarmouth, Barnstable Co., can, in legal meeting, choose each 3 persons fish committee, each inhabitants of town for which they shall be chosen, *sworn* to meet annually on or before April 20, time and place according to majority, constituting, when united, a joint committee; majority such joint committee can fix time, place and manner to take herring, or alewives or perch, in Bass R. and confluent waters, fixing the length of seines, nets, etc., and lines attached to the same, and grant permits inhabitants of either of said towns, fixing quantity of fish which each family in said towns shall receive from such catchers, and fix price, and by vote of said towns may sell at auction, to one or more persons, not more than one season at a time, upon terms directed by said towns or joint committee.

2. One town choosing committee, other neglecting, former committee will have all rights under this act.

3. Committee can keep natural channels open, and widen and deepen them if need be, and can have right of way over land of bordering proprietors, paying fairly, if demanded, without liability as trespassers, and molestation of committee, or obstructing, under penalty of \$20 each offence.

4. Takers of alewives, herring, or perch, in Bass R., or streams connected or within half mile of mouth of river in any direction, against orders of said committee, under penalty, each offence, not above \$10 for catch less than 1 bbl.; for 1 bbl. or more, \$10 to \$20.

5. Vessels, etc., found in said waters, or within half mile of river's mouth, with more fish than are allowed by said committee on board, or persons detected in taking illegally with seines or nets, not authorized by said committee, any of said committee may seize such vessels, etc., not detaining above 48 hours to attach for costs and penalties.

6. Fines and forfeitures this act go half to Dennis and Yarmouth, half to prosecutors, unless committee prosecute, when all forfeitures go to towns, before justice of peace.

7. Inconsistent laws as to Dennis and Yarmouth repealed.

8. Effect on passage. [March 16, 1849.

[Chap. 64.]

1. J. Higgins, Jr., *et al.* of Eastham, fish weir privilege at or near Cook's Brook, bay side of said town, from upland to low-water mark, *but* without injury to navigation.

2. Injuries to weir, illegal taking, penalty not above \$20, and liability to injured parties to civil suit. [March 20, 1849.

[Chap. 128. 1821, 97.]

Seining and netting, harbors of New Bedford and Fairhaven, or influent waters, north of line drawn due east from Almshouse in N. Bedford to Fairhaven, for any fish but menhaden, penalty \$20 each offence, Police Court N. Bedford, or Justice of the Peace, for use of complainant. 1849, 219; 1854, 293. [April 20, 1849.

[Chap. 219. 1821, 97; 1849, 128.]

Preceding act shall not apply to herring fisheries in Acushnet R. from Island Marsh to head waters. 1854, 293. [May 2, 1849.

[1848.—Chap. 12.]

1. Feb. 7, 1820, is hereby repealed, but persons liable under this act are not absolved.

2. Statute laws in force prior to repealed act shall not be revived by this.

3. Effect on passage. [Feb. 14, 1848.

[Chap. 47.]

1. Land-owners, abutting on Trap's Pond or Creek, shall each have one share only in said fishery, and no additional shares shall be created, *but* each owner may divide his share.

2. Effect on passage. [March 18, 1848.

[Chap. 116.]

1. Act of Feb. 25, 1815, in so far as applying to length of seines on North R. is repealed, *but* suits already begun shall not be interfered with.

2. Effect on passage. [April 18, 1848.

[Chap. 185.]

1. J. Vinson, J. T. E. Gage, *et al.*, associates and successors, incorporated "Pocha Pond Meadow and Fishing Co.," Edgartown, and can close the outlet of said town, with causeway from 20-acre lot to Cape Poge beach in Edgartown, *but* causeway shall be of suitable width and kept in repair so that loaded carriages may pass over in safety, it being always free for travel, *and* new outlet must be made for said pond into Edgartown Harbor through lands of said proprietors, causeway being at place suited to draining said meadow and regulating herring fishing, *but* suitable bridges shall be built over said creek according to 44 R. S.

2. Fines, \$3 catch less than 1 barrel, catch 1 barrel or more, \$5 each barrel so taken.

3. Not to molest people of Edgartown in rights.

4. Damages resulting from this act, commissioners Dukes Co., after hearing of interested parties, shall estimate and assess, and interested parties can appeal to a jury at same or next meeting of County Commissioners, as in case of highways.

5. Owners of land, abutting said waters, may become members at any time before said outlet is closed.

6. Present owners, each to have one share; no additional shares; shares can be divided however. [April 25, 1848.]

[Chap. 187.]

1. Lynn, Saugus and S. Reading may, together or separately, enforce laws regulating alewife fishing in Saugus R.

2. Inconsistent acts repealed. [April 25, 1848.]

[1847.—Chap. 40.]

1. People of Tisbury, annual town meeting, March or April, shall choose one or more discreet men as fish committee, to be sworn and to regulate alewife fishery in Chappaquonsett Pond and Creek in said town, and fix time, manner and place of taking and remove obstructions in said creek, and keep open fish passage from Vineyard Sound or sea into Chappaquonsett Pond, so that inhabitants may have free fishery.

2. Said committee shall post in three or more public places in said town on or before March 10, the rules of said committee.

3. Opposition or obstruction to said committee, or unlawful taking, except at prescribed times and places, before any justice of the peace, not a Tisbury man, penalty not above \$20 each offence, one-half to town, one-half to informer.

4. Inhabitants may be witnesses.

5. Selectmen of Tisbury can direct fish committee to sell such part of fish caught in said creek as will pay accrued expenses, but such part shall not exceed one-sixth of yearly catch.

6. Damages sustained by land-owners, on whose land the fish is taken, indemnified by selectmen. Refusal by selectmen to be met by action on the case against town Tisbury.

7. No herrings or alewives to be taken from Vineyard Sound or sea within 1 mile of said Chappaquonsett Creek, or make new outlets from C. Pond, save by a vote of Tisbury legal meeting.

8. Nothing in this act to prevent meadow-owners from draining or flowing through said creek when it can be done without prejudice to passage of fish. And nothing in this act shall affect suits now pending or legal rights. [March 4, 1847.

[Chap. 94.]

People Yarmouth may, at legal meeting, fix time, manner and place of taking alewives or herrings in Dexter R. and other waters connecting Coonamissett Pond with Vineyard Sound or sea, and also other rivers and waters heretofore used as herring fisheries, and adopt rules by them deemed expedient for the preservation of said fishery, dispensing fish privilege as they like and choosing committee of three to see to execution, and they shall be sworn.

2. Selectmen, time being, shall post established regulations in three or more public places in said town, within one week after said rules are passed.

3. Persons taking unlawfully shall for each offence pay not above \$5, and seining in Vineyard Sound in either March, April, May or June without leave of fish committee, \$20 at most each offence. Fines, one-half to town, one-half to prosecutor, inhabitants witnesses, *but* this act does not affect legal rights.

4. Acts of March 2, 1798, and March 1, 1799, as to alewives repealed in streams of Falmouth.

5. Effect on passage. [March 17, 1847.

[1846.]

[N. B.—From this point, only laws of general application are given in full; all others are merely alluded to for convenience of reference.]

[Chap. 92.]

This act transfers to Weymouth Iron Co. all fishery rights as to alewives in Black R., G't Pond and Whitman's Pond. [March 11, 1846.

[1845.—Chap. 79.]

As to passage-way in dam of Ipswich Manf'g Co. April 10 to June 1. [Feb. 26, 1845.

[Chap. 91.]

As to fish-way in Manning's Dam in Ipswich R. [Feb. 28, 1845.

[Chap. 130.]

Incorporating White Pond Fishing Co. [March 15, 1845.

[Chap. 149.]

As to fishing in Little R. [March 18, 1845.

[1844.—Chap. 63.]

Vide 1852, 92. [March 7, 1844.

[Chap. 65.]

In addition to 1838, 19, as to alewife fishery in Agawam and Half-Way Pond R's. [March 7, 1844.]

[1843.—Chap. 20.]

1. As to alewives in Herring Pond, town of Barnstable. [March 20, 1843.]

[Chap. 73.]

As to fishery in Taunton Gt. R. *Vide* 401, 1855. [March 24, 1843.]

[1842.—Chap. 62.]

Shad fishery, Monomoy Bay. [March 3, 1842.]

[Chap. 82.]

Corporating Coy's Brook Fishing Co. [March 3, 1842.]

[Chap. 75.]

Long Pond Fishing Co., Yarmouth. [March 3, 1842.]

[1841.—Chap. 61.]

As to Skinnaquits Fishing Co. [March 6, 1841.]

[Chap. 76.]

As to fisheries in Maddeket harbor, Nantucket. [March 13, 1841.]

[1840.—Chap. 24.]

As to fishery, Long Pond, Nantucket. [March 7, 1840.]

[Chap. 37.]

As to Monatiquot R., Braintree, etc. [March 18, 1840.]

[Chap. 45.]

As to fishery North R., Plymouth Co. [March 18, 1840.]

[Chap. 67.]

Corporating Sanchachautacket Fishing Co., Edgartown. [March 21, 1840]

[1839.—Chap. 102.]

As to fisheries in Barnstable and Marshpee. [April 5, 1839.]

[Chap. 83.]

Corporating Trap's Creek Fishing Co. [April 3, 1839.]

[Chap. 123.]

Corporating Eastham Fishing Co. [April 6, 1839.]

[Chap. 134.]

As to Ipswich R. [April 9, 1839.]

[1838.—Chap. 12. 1860, 89; 1853, 377; 1844, 63.]

As to Agawam and Half-Way Pond R's. [Feb. 26, 1838.]

[1837.]

Chap. 18 in add. to 1831, 73. [Feb. 22, 1837.]

[Chap. 99.]

Fish Weir Co. in Orleans. [March 25, 1837.

[Chap. 118.]

North Falmouth Fishing Co. [April 7, 1837.

[Chap. 135.]

In addition to 1815, 83, as to fishing in Dennis. [April 12, 1837.

[Chap. 159.]

Rock Harbor Fishing Co. [April 13, 1837.

[Chap. 184.]

Added to Palmer R. Act, 1803, 116. [April 18, 1837.

[Chap. 193.]

Act as to alewife fishing in Middleborough. [April 18, 1837.

[Chap. 195.]

Fishery in Newbury. [April 18, 1837.

[1836.—Chap. 56.]

As to alewife fishing in Wellfleet. [March 23, 1836.

[Chap. 130.]

As to fishery in Palmer's R. [April 4, 1836. .

[Chap. 158.]

As to fishery in Mystic R. [April 8, 1836.

[Chap. 177.]

Corporating Andrews Fishing Co. in Harwich. [April 9, 1836.

[Chap. 205.]

Corporating Orleans Fishing Co. [April 11, 1836.

[Chap. 218.]

As to alewife fishery in Wewantic R. [April 13, 1836.

[Chap. 198.]

As to alewife fishery in Weymouth. [April 9, 1836.

Fishery Act of the Revised Statutes, chap. 55, same as 61 General Statutes.

ANCIENT CHARTERS.

[Page 148, Chap. 63.]

2. All householders have free fishing in any great ponds, bays, coves and rivers, so far as the sea ebbs and flows within their own town, unless freemen of said town or general court have otherwise appropriated them: *provided*, that no town shall appropriate to any persons any great pond, containing above 10 acres of land, and that no man shall come upon another's land without their leave otherwise than as hereafter expressed.

The which is clearly to determin.

3. It is declared that in all creeks, coves and other places about and upon salt water, where the sea ebbs and flows, the proprietor of the land adjoining shall have propriety to the low-water mark, where the sea doth not ebb 100 rods, and not more wheresoever it ebbs further: *provided*, that such proprietor shall not by this liberty have power to stop or hinder the passage of boats or other vessels in or through any sea, creeks or coves, to other men's houses or lands.

4. And for great ponds lying in common though within the bounds of some town, it shall be free for any man to fish and fowl there, and may pass and repass on foot through any man's propriety for that end, so they trespass not upon any man's corn or meadow.

ABSTRACT OF PRINCIPAL DECISIONS.

[1641, 47.]

As to fishing, &c., in tide-waters, it seems to have been intended to restrict the right to householders in the town where the waters were. But this part of the ordinance is not at all regarded in practice, and probably never was intended to apply to the common law right of every citizen in those waters. Otherwise as to ponds it is believed that great ponds, that is, of more than ten acres, have in many instances become private property. "*But whether the owners can restrain all other persons from fishing therein is not known to have been decided.*"—*Metcalf on Contracts*, p. 299.

This statement of Judge Metcalf is the latest authority on the rights of riparian owners of great ponds, and the probable course of the law in the matter can only be inferred from the cases which have brought the matter indirectly before the courts.

In the case of *West Roxbury vs. Stoddard*, the tendency seems to have been to favor the common law rights of the public *against* those of riparian owners. Judge Hoar gave as his opinion that "fishing, fowling, boating, bathing, skating or riding upon the ice, taking water for domestic or agricultural purposes, or for use in the arts, are lawful and free to all persons, upon these ponds, if such persons own lands adjoining them or can obtain access to them without trespass, so far as they do not interfere with the reasonable use of the ponds by others, or with the public right, unless in cases where the legislature have otherwise directed."—7 *Allen*, 171.

Shaw, C. J., in *Cummings et al., vs. Barrett et al.*, 10 Cushing, 188, says: "What the rights are of adjacent or riparian owners of land bordering on such ponds (great) has, we believe, never been the subject of adjudication or discussion."

The common law right will probably be recognized in the courts, but the most important point is to decide what shall constitute trespass with damages against parties passing over the lands of riparian owners to reach great ponds for the purpose of fishing therein.

If roads exist, leading to such ponds, actions against such parties for trespass on riparian lands, when such roads might be used, would probably lie.

By the Colony Laws, the common law right to fish in rivers, so far as the tide ebbs and flows, is sustained.

Nevertheless, in 1779, in the case of *Freary vs. Cooke*, 14 Mass. 488,* an attempt was made by riparian owners to assert their right to the fishery *ad filum aquae*, and to get damages from the defendant for fish taken therein. In this case the plaintiff urged a *custom* as defence, which was not sustained by the court, the custom not being established as valid. Moreover the tenor of the decision seems to favor the view that no custom would have availed in prejudice of common law rights.

In *Coolidge vs. Williams* it was decided that if the legislature makes no disposal of the fishery rights in navigable rivers, riparian towns may dispose of the same, and if such towns do not avail themselves of this privilege, then all inhabitants of such towns may take fish in such rivers, provided they do not trespass on the rights of others. Private statutes are not to be construed against existing rights and privileges.

The decision of this case extends the privilege, given by the colony laws to householders, to all citizens.

In *Commonwealth vs. Chapin*, it was urged on the authority of Pennsylvania precedents that the common law doctrine as to navigable rivers did not apply to great rivers, such as the Connecticut, and that such rivers were, in the technical sense, navigable above the ebb and flow of the tide, and that riparian land owners could have no common law rights in such great rivers.

But it was decided that in this State *all* rivers are navigable so far as the tide ebbs and flows; that in navigable rivers fishing rights are common.

But above the ebb and flow the public have right of way, though not a right of fishing, for the public have an easement for passing in boats, etc., in rivers which, though not classed with navigable rivers, are in fact navigable rivers for craft above the ebb and flow of the tide.

An interesting question here comes up as to the exact definition of the point where the tide ceases to ebb and flow. I have examined the cases very carefully with reference to this point, and have been able to find no decision which touches upon this matter, and no reference to such a decision. The practical state of the case is, that any plaintiff would have to prove that the tide did not ebb and flow in the waters which he should seek to protect, just as in any action for trespass, the plaintiff must begin by proving his title.

As to the doctrine of easements referred to above in *Commonwealth vs. Chapin*, "an uninterrupted adverse use during twenty years" would be necessary to establish such easement.—*Gen. Stat. Ch. 90, 33.*

As to the obligation of dam-owners in respect to fishways in their dams, it was decided in *Stoughton vs. Baker*, 4 Mass. 522, that, although the legislature appoint committees to make fishways in certain dams, partly or wholly, at the expense of the owners, said owners cannot be charged with the expense of such committees; no prescriptive rights, from charter or otherwise, can prejudice the rights of the public that fishways shall be kept open, and *all* dams are held subject to this restriction.

The government can enforce compliance with these laws as to dams, though the complete prostration of any dam will give the owner a remedy by action at law. Finally, such committee may cause the alterations to be made under

* The river being navigable at this point.

their direction; but they are not personally answerable for those whom they employ; and as the exercise of their authority is personal, it cannot be delegated to any other person, or even to one of their own number.

In this case it was openly attempted to question the right of the Commonwealth to oblige dam-owners to put fishways into their dams. The position seemed to be a strong one, for the dam in question was held under a charter dated in 1633, and the said charter was extended by a grant made in 1634 of a several fishery from the said dam to the weir below.

Accordingly it seems that if this right of the legislature could be shaken in any case of prescriptive claim, it could have been so shaken in this. The result of the case evidently shows the tenor of judicial decision on this point, as well as in the matter of great ponds and estuaries, to have been in favor of all common law rights of the public, as against those of *all* individuals.

In the case of *McFarlin vs. Essex Co.*, 10 Cushing, 304, as to fish as *feræ naturæ*, Shaw, C. J., said that it was the established law of Massachusetts that the *right to the soil under rivers not navigable is in the riparian owners*. If the same person owns the land on both sides of any stream, the property in the soil is wholly in him, subject to certain duties to the public; and if different persons own the land on opposite sides, each is proprietor of the soil under the water to the middle or thread of the stream (*ad filum aquae*.) In this case, also, it was incidentally decided that no right by prescription could be acquired but by *adverse* use and occupation during twenty years, and from the mode of statement adopted by the judge already mentioned, I should doubt if such proscriptive rights could *ever* be acquired. At all events, it was stated in a doubtful form. Also decided that, though A should adversely occupy ten years a fishery against B, said A cannot transfer, by deed or otherwise, to C his ten years' prescription, thereby enabling C, by ten years' further possession, to claim absolutely under the easement statute. From this case, and from *Waters vs. Libby*, 4 Pickering, 146, I conclude that fish in rivers are always to be regarded as *feræ naturæ*, whether the rivers are navigable or not; hence no proprietor, even above the ebb and flow of the tide, could obstruct the passage of fish; all he has a right to do being to prevent persons, acting without his leave, from fishing on his lands, or opposite to them, *ad filum aquae*.

The two cases of *Melvin vs. Whiting*, 10 Pickering, 295, and 13 Pickering, 184, it was decided that adverse possession and occupation on the part of an heir should be counted as part of the twenty years of such possession required by statute to establish an easement.

[D.]

BRIEF HISTORY OF THE MOVEMENT, ON BEHALF OF THE STATE, FOR
THE RESTORATION OF INLAND FISHERIES.

April, 1865.—On remonstrance of New Hampshire and Vermont against the cutting off of their migratory fishes, by high dams on the Merrimack and Connecticut Rivers, legislative resolves appoint two *Commissioners* to *investigate* the whole question.

December, 1865.—These Commissioners, Theodore Lyman and Alfred A. Reed, report to Governor and Council.

May, 1866.—Legislature provides appointment of *two Commissioners* for *five years* to carry out a general plan for opening the Connecticut and Merrimack Rivers, by fishways for shad and salmon over the dams. The said Commissioners to work in connection with those of New Hampshire.

December, 1866.—The Commissioners, Theodore Lyman and Alfred R. Field, report the fishways finished on the Merrimack, and that New Hampshire had opened the upper river.

June, 1867.—Legislature *enlarges powers* of Commissioners, who may examine *all dams* and order fishways therein, and may re-stock ponds, &c.

December, 1867.—Commissioners report the success of the Merrimack fishways, and the beginning of re-stocking our inland waters. They also give copious details upon artificial breeding, &c.

June, 1868.—Legislature makes a special grant of \$12,000 to build the Holyoke fishway (as a guarantee, in case the company proved *not liable*.)

December, 1868.—The Commissioners report the satisfactory progress in re-stocking our inland waters, explain the legal difficulties about the Holyoke dam, and present the necessity of a general alteration in our fishery laws.

NOTE.—Of the \$30,000 appropriated since April, 1865, there will be on hand January 1, 1869:—

Special appropriation for Holyoke,	\$12,000 00
Of other appropriations (about,)	2,000 00
	<hr/>
	\$14,000 00

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R E P O R T

OF THE

COMMISSIONERS OF FISHERIES,

FOR THE YEAR ENDING

J A N U A R Y 1, 1870.

BOSTON:
WRIGHT & POTTER, STATE PRINTERS,
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1870.

Commonwealth of Massachusetts.

R E P O R T .

The Commissioners on Inland Fisheries, under chapter 384 of the Acts of 1869, beg leave, respectfully, to present their Fourth Annual Report.

FISHWAYS.

(1.) *At Holyoke.*—This matter, which has caused so much trouble, seems in a fair way for settlement.

The last legislature, at the suggestion of both the Holyoke Water Power Company and the Commissioners, passed a bill (chap. 422, 1869), by which the case could be promptly placed before the supreme court, to decide whether the State, or the company, ought to pay for the fishway.

Meantime, the company's engineer has begun the structure, in connection with the general repairs of the dam, and it is now so far advanced that it may readily be finished in a short time. The \$12,000 voted by the legislature in 1868 (Gen. Res. chap. 53), has never been used. Should the decision of the supreme court be adverse to the Commonwealth, this money will be drawn; and an additional appropriation will probably be needed, because the problem at this dam has proved much more difficult than at Lawrence.

(2.) *At Lawrence.*—With the improvements of last year has come an increased run of fish. Alewives in large numbers and some shad were seen on their way up, and doubtless surmounted the dam, and one grilse salmon was taken near

Manchester by a fisherman in pursuit of trout. Nevertheless, the top-hamper of this fishway has always been defective in principle, and the Commissioners have been led to experiment on the best way of producing a gentle stream of water down an inclined plane. The first question for solution is, what kind of stream is most attractive to fish and most easily surmountable. The old idea was, that fishes need still pools to rest in during their passage over a high fall; and, provided these were furnished, very little attention was paid to the runs or the steps that separated these pools. This idea proves by no means a correct one. The secret of a fishway is: (1.) that the fish should be attracted to enter; (2.) that, once in, they should neither wish nor, so to speak, be able to turn back. Therefore it is not entirely a question of easy passage, because fishes will often refuse such.

At the Mystic Water Company's dam, in West Medford, was a step-fishway, consisting of a number of deep boxes, each communicating with that above by a little fall. Nothing could be easier than this ascent. The alewives swarmed in thousands at the foot of the dam. A few would jump the first and second, or even the third fall. Beyond this not one would go; nay, they would turn about and come down again. The inhabitants of the towns above were quite desperate at this perversity, while the company maintained, not without a good show of reason, that all had been done that was possible. The fishway was as easy as possible, there was a grating to direct the alewives, and still they refused it. In this dilemma, the Commissioners ordered a small trough put up, as an experiment. It was a foot wide, eight inches deep, and arranged with little cross-bulkheads, on Foster's plan. One end was secured on the crest of the dam and the other fixed in the water at its foot. While the carpenter stooped to arrange the trough the alewives rushed up in it, in hundreds, between his legs! The reason of this success was, that the stream was an almost simple spiral ribbon of water, without whirls or still places; therefore the fish were opposed by that uniform current which stimulates them to press onward and deters them from turning back; for, it is to be observed of migratory fishes, especially, that they seldom turn tail to a strong current, but will stem it, if possible, and, if not, will back down into still water. Where

there are still pools they seem 'to grow suspicious ; and strong eddies are liable to confuse them. This latter fault is to be found in fishways that are *too wide*. The bulk of water finds room to make violent whirls as it strikes the cross-bulkheads. Moreover, as its momentum depends not only on its velocity, but also on its mass, an increase of width adds to the difficulty of moderating the flow of the water, which is increased in mass, while it encounters relatively less friction from the sides. These faults have been so apparent at Lawrence that it has been decided to lessen the width of the way at least one-half, while the length will be increased by making a zig-zag course.

On Ipswich River.—The fishways were opened for the first time this year, and some alewives are reported to have run up as far as Middleton.

On the Weweantit River.—This stream, which heads at Sampson's Pond, in Carver, was formerly noted, like most of its neighbors, for an abundance of alewives. At the request of the inhabitants of Wareham, the river was this year opened by fishways, which will be so improved by next spring as to give a good passage to the fish.

FISH CULTURE.

(1.) *Of the Alewife (Alosa tyrannus).*—It has been stated (Report for 1867, p. 40 ; 1868, p. 7), that of the yearling shad and alewives only the males run into fresh water. This year a very puzzling discovery was made in Mystic Pond. Shoals of small fishes, not distinguishable specifically from the larger alewives, were seen below the dam, and, of them, many were *females full of spawn*, yet not larger than what are known as yearlings. There were two runs of them, corresponding to the "Gray backs" and the "Black bellies." Their length was four or five inches, and, altogether, they were plainly the same as those sold in the market under the name of "sprats." The two unusual circumstances were their abundance and the presence of mature females. A corroboratory fact was the discovery in the artificial reservoir of the Charlestown Water Works of exactly similar mature female fish, the age of which was known. This reservoir had been emptied and cleaned some time before, and no water came into it except that pumped by a steam-engine from Mystic Pond. The embryos

of alewives were thus introduced, and their age could not antedate the emptying of the reservoir above referred to. A female there caught was full of spawn, and in other respects was entirely like those taken at the dam. The age of this fish could not exceed twenty, nor be less than eight months, which would correspond very well to our previous ideas about individuals of that size. All this is very clear so far as concerns Mystic River, but does not correspond to what is elsewhere observed. Usually, the number of yearlings is not very great, and, as far as heretofore examined, they all are males; moreover, they do not run into fresh streams at all, unless in the wake of shoals of adult fish. This last habit may be exemplified by the artificial restocking of a stream. Mr. E. S. Hadaway and others hired the fisheries of Eel River and Town Brook, in Plymouth, under a State Act (chap. 58, 1865). In the spring of 1865 they carried up about a thousand alewives for each stream, and placed them near the head-waters, where they spawned. Their return to the sea was so cut off by dams, that few or none would be likely to survive the descent; and it was part of the plan of Mr. Hadaway annually to carry up a proper number of breeders, and to gather his harvest of their descendants *near the mouth of the river*, trusting to the safe descent of a sufficient number of the *young fry* through the wasteways, or even through the mill-wheels. Now, had these fry conducted themselves after the fashion of those of the Mystic River, they would have reappeared in the spring of 1866, the females filled with spawn. Not so. In the springs of 1866 and 1867 a few alewives, small and large, were seen; in 1868, several schools of mixed sizes; but the *present* spring (1869) came, for the first time, a good run of large fish,—most of them males, fully grown,—pushing up in the usual manner of this species. In other words, they made no considerable attempt to return to their breeding grounds until they were four years old. All of which corresponds with the observations of Mr. Treat, near Eastport, Me., and with the evidence deduced from the barring out of alewives by impassable dams (see Report for 1868, p. 8). It should be added that Mr. Hadaway's experiment has succeeded, thus far, only in Eel River; few fish have showed themselves in Town Brook—a failure that, perhaps, may be accounted for

by the quantity of sawdust and other deleterious matter discharged into it.

The breeders were carried in a tank three feet long, two feet wide, and a foot deep, mounted with a strong spring on a pair of wheels. On top the tank is a spout six inches high, fitted with a tight cover; and at the hind end a little door opening inwards. The breeders are introduced through the spout, and the tank having been filled as full as possible with water, the cover is fastened on, and the machine is drawn by a horse to the pond, where it is backed into the water, the hind door opened, and the fish allowed to pass out. In this way a hundred at a time have been conveyed seven miles. The success of this contrivance seems to depend on the fulness of the vessel, whereby the "swash" is avoided, which not only knocks off the scales, but probably stifles the fish by violent and irregular currents through their gills. The best temperature for the water is that of a cold spring; ice is apt to lower it too much.

(2.) *Of the Shad (Alosa præstabilis).*—No regular arrangements were this year made for artificial propagation on the Connecticut River; but the Messrs. Smith, of South Hadley Falls, voluntarily undertook it, and report that they hatched a large quantity during the season. They took the first ripe spawn on the sixth of June, and five days were required to hatch it. On the fifteenth of June they had sixteen boxes in use, but so many chips and shavings came down from the repairs on the dam, that they desisted from their experiments.

On the Merrimack the experiments were conducted by the State at two different points, by Mr. A. C. Hardy at Marston's Ferry, and by Mr. J. M. Gage at his fishery, two and a half miles below.

The number of ova taken was estimated as follows:—

At Gage's	.	.	.	.	.	.	2,595,000
Hardy's,	.	.	.	.	.	.	2,160,000
							<hr/>
Total,	.	.	.	.	.	.	4,755,000

Of these, 2,105,000 were distributed as follows—

To Ipswich River,	100,000
-------------------	---	---	---	---	---	---------

To Concord River,	180,000
Weweeantit "	100,000
Eel "	100,000
Nemasket "	100,000
Mystic "	1,125,000
Winnipiseogee Lake,	400,000
	<hr/>
	2,105,000

The balance, 2,650,000, were turned into the Merrimack itself. Of those distributed, four-fifths are thought to have hatched; and three-fourths of those turned into their native river, including several batches which failed entirely. At Gage's fishery a new and highly successful experiment was tried. Hitherto it had been the custom to haul the seine and examine each fish that was caught, trusting to fortune to find ripe breeders. The waste and uncertainty of this process are obvious. To obviate the trouble, a pool was constructed, by damming a rivulet close to the river. As the fish were brought in, the unripe ones were carefully transferred to this pool, where they could be examined day by day, till the spawn was mature. Instead of dying immediately, or running themselves on shore in their fright, (as had been expected,) the shad thus "pounded" seemed almost as tame as domestic animals. They sailed leisurely back and forth in the pool, and paid little attention to bystanders. Some were taken out of the water and examined at least half a dozen times with no bad result other than a considerable growth of conferva on those parts of the body injured by handling. By the aid of this pool very good observations could be made on the conditions most favorable for artificial impregnation. It was found that if the spawn were in the least coherent or lumpy it was sure to fail; and only when it flowed in a rapid easy stream was the impregnation certain. The milt of the male, also, was variable. If clotted, or even thick, it was useless, and it was efficient only when it had attained the appearance and consistency of rich milk. It appeared also that the sexual maturity was not equally affected by the same conditions. The temperature of the pool became, as the season advanced, lower than that of the river; and this difference more or less checked the development of the

seminal fluid; but did not avail to prevent the due ripening of the ova. It would doubtless be better to make a small inclosure in the *river itself* and divide it in two or three parts, wherein the breeders of different degrees of maturity could be kept separate, and where the temperature of the water would be natural. No difficulty was found in moving the fish two or three miles up or down the river, by placing them in a slatted, floating car, which was towed after a boat. The following tables will show the daily details of these fisheries, the times of drawing the seine and number of shad taken; the temperature of air and water; the proportion of males to females; and the amount of spawn taken:—*

* The seines used were about 300 feet long and six deep; with a mesh of four and a half inches.

Hardy's Fishery.—Daily detail of Fish taken, &c.

DATE.	Shad taken.	Males.	Females.	Air at Noon.	Water at Noon.	TIME OF HAULING SEINE.		FISH TAKEN AT EACH SWEEP.	
						A. M.	P. M.	A. M.	P. M.
June 10,	150	142	8	—	—	—	7, 8, 9, .	—	2, 98, 50.
11,	70	52	18	—	—	—	8, 10, 11, .	—	40, 20, 10.
12,	72	60	12	—	—	1,	8, 9, 11, .	8,	30, 22, 12.
13,	86	66	20	45	—	8, 9, 11, .	1, 2, 3, .	39, 25, 12, .	8, 7, 5.
14,	73	62	21	—	—	8, 10, 11, .	1, 2, . . .	31, 20, 9, .	8, 5.
15,	95	72	23	66	67	9, 11, . . .	12, 1, 2, .	55, 12, . . .	17, 8, 3.
16,	82	69	69	60	69	9, 11, 12, .	11, 2 $\frac{1}{2}$, 3 $\frac{1}{2}$, .	30, 22, 15, .	8, 5, 2.
17,	67	50	27	—	—	8, 9 $\frac{1}{2}$, 12, .	1, 2, 3, . .	22, 15, 12, .	8, 7, 3.
18,	66	43	23	54	64	9, 11, 12, .	1, 2, . . .	30, 14, 8, .	9, 5.
19,	53	35	18	—	—	8 $\frac{1}{2}$, 10, 12, .	1, 2, . . .	18, 12, 10, .	7, 6.
20,	80	48	32	—	—	8, 9 $\frac{1}{2}$, 12, .	1, 2, . . .	34, 18, 10, .	10, 8.
21,	52	39	19	65	68	6, 10 $\frac{1}{2}$, 12, .	1, 2, . . .	20, 11, 8, .	7, 7.
22,	68	36	32	58	61	8 $\frac{1}{2}$, 10, 11 $\frac{1}{2}$, .	1, 2, . . .	24, 18, 12, .	8, 6.

June 23,	28	17	11	-	-	7, 8½, 11, .	12, 1, 2, .	11, 2, 8, .	2, 0, 5.
24,	19	11	8	60	64	8, 9½, 11, 12, .	1, . . .	3, 7, 2, 5, .	2.
25,	64	40	24	64	64	8½, 10, 12, .	1, 2, 3, .	17, 12, 12, 12,	8, 3, 0.
26,	8	5	3	62	66	8½, 9½, 10½, 11½,	-	1, 5, 2, 0, .	-
27,	12	7	5	64	66	8, 9, 11, . . .	1, . . .	5, 2, 2, . .	3.
28,	28	16	12	68	66	8, 9½, 11, . .	1, 2, . . .	7, 7, 6, . .	5, 3.
29,	20	14	6	62	68	9, 10½, 12, . .	3½, . . .	7, 5, 6, . .	2.
30,	32	19	13	66	70	8, 9½, 11, . .	12, 1, . .	10, 8, 7, . .	4, 3.
July 1,	8	5	3	55	-	8, 9½, 11, . .	-	5, 2, 1, . .	-
2,	30	17	13	62	66	8, 9½, 11, . .	12, 1, . .	5, 10, 7, . .	5, 3.
3,	26	16	10	-	-	8, 9, 10, 11, . .	-	12, 6, 5, 3, . .	-
4,	17	9	8	73	70	9, 10½, 11, 12, .	-	12, 2, 3, 0, . .	-
5,	14	5	9	60	-	8, 9, 10, 11, . .	-	6, 4, 2, 2, . .	-
6,	17	10	7	53	65	8, 9½, 11, 12, . .	-	11, 4, 1, 1, . .	-
7,	39	24	15	68	64	8, 8½, 9½, 10½, .	-	20, 8, 4, 7, . .	-
8,	30	19	11	62	66	9, 10, 11, 12, . .	1, . . .	15, 5, 6, 3, . .	1.

Hardy's Fishery.—Daily detail of Fish taken, &c.—Concluded.

D A T E.	Shad taken.	Males.	Females.	Air at Noon.	Water at Noon.	T I M E O F H A U L I N G S E I N E.		F I S H T A K E N A T E A C H S W E E P.	
						A. M.	P. M.	A. M.	P. M.
July 9, . . .	20	10	10	68	69	8½, 9½, 11, 12, .	-	13, 3, 3, 1, .	-
10, . . .	32	20	12	62	68	8, 9, 10, 11, .	-	18, 8, 4, 2, .	-
11, . . .	4	3	1	-	-	8½, 9½, 10½, 11, .	-	2, 0, 2, 0, .	-
12, . . .	10	4	6	64	63	9, 10, 11, 12, .	-	7, 2, 1, 0, .	-
13, . . .	17	11	6	64	69	8½, 9½, 11, 12, .	-	11, 4, 2, 0, .	-
14, . . .	15	10	5	64	70	8½, 10, 11, 12, .	-	8, 6, 1, 0, .	-
15, . . .	20	13	7	65	70	8, 9, 10, 11, .	-	7, 8, 3, 2, .	-
16, . . .	17	7	10	66	71	8, 9, 10, 11, .	-	10, 6, 1, 0, .	-
17, . . .	13	6	7	74	71	9, 10, 11, 12, .	-	7, 4, 3, 0, .	-
18, . . .	5	2	3	66	70	9, 10, 11, .	-	3, 2, 0, .	-
19, . . .	4	-	4	-	-	8, 9, 10, 11, .	-	2, 2, 0, 0, .	-
20, . . .	4	1	3	62	68	8½, 9½, 10½, 11½, .	-	2, 1, 1, 0, .	-
21, . . .	1	1	-	70	72	9, 10, 11, .	-	1, 0, 0, .	-

July 22, .	.	.	6	2	4	66	68	9, 10, 11, .	.	-	4, 2, 0, .	.	-
23, .	.	.	6	3	3	61	65	9, 10, 11, .	.	-	5, 1, 0, .	.	-
24, .	.	.	5	-	5	65	67	9, 10, 11, .	.	-	4, 1, 0, .	.	-
25, .	.	.	1	-	1	68	70	9, 10, 11, .	.	-	1, 0, 0, .	.	-
27, .	.	.	4	4	-	73	72	9, 10, 11, .	.	-	4, 0, 0, .	.	-

Gage's Fishery.—Daily detail of Fish taken, &c.

DATE.	Shad taken.	Spawn taken.	AIR.			WATER.			TIME OF HAULING SEINE.		FISH TAKEN AT EACH SWEEP.	
			6 A. M.	M.	6 P. M.	6 A. M.	M.	6 P. M.	A. M.	P. M.	A. M.	P. M.
June 1, . . .	57	-	-	-	64	-	68	-	11, . . .	. . .	19, . . .	26, 12.
2, . . .	54	-	72	90	80	65	68	-	9, 11, . . .	. . .	16, 7, . . .	19, 12.
3, . . .	52	-	63	82	-	66	70	68	8, 9, 11, . . .	. . .	15, 3, 0, . . .	17, 17.
4, . . .	60	-	63	85	-	66	70	-	8, 9, . . .	. . .	8, 28, . . .	9, 15.
5, . . .	50	-	70	82	-	65	72	-	8, 9, 11, . . .	. . .	2, 8, 6, . . .	7, 4, 6, 5, 12.
7, . . .	43	50,000	52	73	-	68	71	-	8, 9, 10, 11, . . .	. . .	0, 5, 10, 8, . . .	19, 1, 0.
8, . . .	37	150,000	52	62	59	68	68	69	8, 10, . . .	. . .	3, 2, . . .	2, 6, 7, 17.
9, . . .	111	150,000	52	65	64	65	68	67	8, 9, 9½, 11, . . .	{ 2, 3, 4, 5, 6, 6½, 7, } 8, . . .	17, 12, 1, 11, . . .	{ 2, 14, 6, 7, 5, 1, } 5, 7, 14.
10, . . .	54	150,000	49	76	62	65	68	66	9, 11, . . .	. . .	9, 6, . . .	{ 11, 3, 8, 13, 7, } 7, 4.
11, . . .	63	180,000	61	74	58	64	68	66	9, 10, 12, . . .	. . .	9, 4, 2, . . .	{ 10, 0, 2, 9, 5, 12, } 10.
12, . . .	30	30,000	58	62	65	62	64	65	2, 3, 7½, 8, 8½, 9, . . .	. . .	-	3, 0, 5, 9, 7, 4.
13, . . .	28	150,000	54	70	70	62	66	65	-	. . .	-	2, 8, 11, 5, 2.

June 14,	.	34	150,000	68	80	70	65	68	68	10,	.	.	{ 2, 7, 7½, 8, 8½, 9, 9½, 10, 11, . }	2,	.	{ 3, 3, 6, 5, 2, 1, 6, 4, 2, . }
15,	.	30	-	70	78	64	66	68	66	-	-	-	{ 7½, 8, 8½, 9, 9½, 10, . }	.	-	{ 0, 12, 3, 4, 4, 2, 3, 2, . }
16,	.	32	-	59	67	66	64	68	68	9,	.	.	{ 6, 6½, 7, 7½, 8, 9, . }	0,	.	{ 7, 11, 4, 2, 3, 1, . }
17,	.	53	-	53	70	69	64	68	68	-	-	-	{ 3, 3½, 5, 5½, 6, 7, 7½, 8, 9, 10, . }	.	-	{ 2, 0, 9, 12, 9, 7, 7, 2, 32, . }
18,	.	64	-	60	74	70	65	68	66	-	-	-	{ 5, 5½, 6, 6½, 7, 8, 8½, . }	.	-	{ 3, 18, 9, 10, 8, 9, 7, . }
19,	.	63	100,000	76	72	70	65	70	68	-	-	-	{ 2, 2½, 3, 4, 5, 6, 7, 8, . }	.	-	{ 11, 20, 2, 10, 7, 11, 2, 0, . }
20,	.	50	20,000	66	64	64	68	68	67	5,	.	.	{ 5½, 6, 7, 8, 8½, 9, 9½, . }	0,	.	{ 10, 20, 6, 3, 4, 4, 3, . }
21,	.	52	60,000	62	80	62	68	68	68	-	-	-	{ 3, 3½, 4, 4½, 5, 5½, 6, . }	.	-	{ 5, 0, 0, 4, 5, 4, 11, 4, 5, 5, 2, 7, . }
22,	.	27	40,000	58	61	60	65	66	66	11½,	.	.	{ 3, 3½, 5, 5½, 6, 6½, . }	1,	.	{ 2, 3, 1, 0, 3, 5, 6, 1, 3, 2, . }
23,	.	27	50,000	58	74	74	64	66	66	10,	.	.	{ 7, 7½, 8, 8½, . }	0,	.	{ 2, 0, 8, 2, 4, 5, 2, 2, 2, 0, . }
24,	.	42	20,000	64	70	75	66	68	69	-	-	-	{ 3, 3½, 4, 4½, 5, 6, 8, . }	.	-	{ 0, 8, 0, 3, 6, 2, 2, 0, 5, . }
25,	.	46	100,000	62	75	74	65	70	70	-	-	-	{ 6, 6½, 7, 7½, 8, 8½, . }	.	-	{ 11, 1, 8, 19, 4, 2, 1, 0, . }
26,	.	22	-	58	68	69	66	66	68	-	-	-	{ 7, 7½, 8, 8½, 9, 9½, . }	.	-	{ 6, 5, 2, 2, 4, 3, 0, . }
27,	.	31	100,000	62	68	63	65	66	65	-	-	-	{ 1, 2, 3, 4, 5, 6, 8, . }	.	-	{ 1, 2, 4, 4, 7, 6, 1, 5, 1, 0, . }
28,	.	22	100,000	60	76	66	66	68	68	-	-	-	{ 2, 6, 7, 7½, 8, 8½, . }	.	-	{ 1, 3, 0, 5, 3, 4, 3, 3, . }

Gage's Fishery.—Daily detail of Fish taken, &c.—Concluded.

DATE.	Shad taken.	Spawn taken.	AIR.				WATER.			TIME OF HAULING SEINE.		FISH TAKEN AT EACH SWEEP.	
			6 A. M.	M.	6 P. M.	AIR.	6 A. M.	M.	6 P. M.	A. M.	P. M.	A. M.	P. M.
June 29, .	35	—	64	80	82		66	71	72	—		—	{ 4, 1, 9, 3, 8, 3, 3, 2, 2.
30, .	31	125,000	68	80	68		70	72	70	9,		0,	17, 6, 3, 2, 3
July 1, .	28	—	55	57	53		68	68	66	—		—	{ 0, 0, 0, 0, 0, 10, 6, 6, 2, 2, 2, 0.
2, .	31	250,000	54	74	65		67	68	67	—		—	{ 8, 6, 6, 1, 0, 2, 7, 1.
3, .	33	—	66	85	80		66	70	70	—		—	{ 2, 5, 3, 6, 4, 10, 2, 1.
4, .	16	225,000	75	73	74		69	72	70	—		—	0, 2, 8, 3, 2, 1.
5, .	1	250,000	60	63	65		68	73	70	—		—	0, 1, 0.
6, .	6	—	60	60	67		68	70	70	—		—	{ 0, 0, 1, 2, 0, 1, 1, 1.
7, .	12	50,000	48	64	61		68	73	67	—		—	0, 1, 3, 2, 6, 0.
8, .	8	—	74	74	76		71	72	72	—		—	2, 1, 2, 3.
9, .	6	50,000	70	78	70		71	72	71	—		—	0, 2, 3, 1, 0.
11, .	1	20,000	74	91	78		71	75	76	—		—	0, 1, 0.

The great number of males compared with females is a curious circumstance, observed also among alewives, and among trout and land-locked salmon. At Hardy's, some schools consisted almost wholly of males, and the proportion for the whole season was large. At Gage's, females were more numerous, but, even there, they often seemed not more than one-third of the whole number; and, what is singular, there was taken at that place, only *one ripe female* during the season, whereas they were common two and a half miles above. This looks as if the spawn matured somewhat suddenly, and then the fish ran immediately to their beds, just as trout work into gravel at a similar season. Precisely analogous facts have been observed on the Connecticut, where no ripe females could be taken at Springfield, although they were abundant a few miles above, at Hadley Falls (see Report for 1868, p. 10). The manner of spawning among shad and alewives has been determined by direct observation. Gathered in close schools, the males and females circle slowly about, often with the dorsal fin out of water; suddenly, as by an electric shock, they make a dart, and immediately clouds of spawn and milt are shot into the water. Where there is only a single pair of shad, they swim slowly in curves, the male keeping his head close to the pectoral fin of the female.

In former reports, the effects of temperature on ova have been considered, and it was proved, that, when the water rose above 82°, the embryo was destroyed; the experiments of the present season have showed further, that its existence is limited to 61°, as the *lowest*; its life is, therefore, included within about 18°; though 14° would perhaps be more accurate. The salmonidæ have a greater elasticity and hardihood, and their embryonic development will go on within a range of at least 25°. And, if we say that the hardihood of the salmonoid embryo is to that of the clupeoid, as 25 to 14, we also express pretty nearly the relations of the adult fishes in power of enduring cold and heat.

In taking the averages of these tables, we find, as to the whole number taken and the proportion of males to females as follows:—

June 10-26 = 16 days.	Whole no. taken, 1,207.	Males to females, 5 : 2.
June 26, July 28 = 32 days.	“ “ “ 465.	“ “ “ 3 : 2.

In other words, five times as many fish can be taken *daily* during the last two-thirds of June as during July. But the proportion of female fish is greater in July. For the males to come on the breeding grounds before the females seems a general habit among fishes. It has been observed, at any rate, among the salmons, smelts, and codfish. The whole number of shad mentioned in the table is larger than the total as given by Mr. Hardy, because he did not reckon a large number of males returned to the river, alive.

The mean temperature of air and water will be found as follows, during the hottest part of the day:—

June, —.	Air 71°.	Water 66°.
July, (11 days.)	“ 65°.	“ 65°.

In June the water averaged 5° cooler than the air. In the first third of July came an unusually cool period, which reduced the air 6°, but the water only 1°.

The details in the tables, of the number of fish taken show that no increase of *large* fish has as yet taken place, in spite of two years of prohibition in the Merrimack. This is exactly what ought to be expected from what we really know of the growth of shad, to wit, that they must be three, four, or even five years old, before they are large enough to be stopped by the 4½ inch mesh of our seines. Were they full grown at a year old the present season should have shown a great increase. On the other hand, if the four-year theory is correct, we must look for an increase in 1871 at the earliest and in 1873 at the latest. Should there be no marked increase *then*, we must admit, either that both theories of growth are wrong, or that the prohibition of seining and the introduction of artificial propagation do not really help the fecundity of a river.

The shad fishery of the Connecticut has been this season somewhat puzzling in its results; for, whereas the pound fishery, just *outside* the mouth of the river, has been good, and about as productive as last year, the seining and gill-netting *within* the mouth have been very poor, and even worse than last year; while on the *upper* part of the stream within Massachusetts, the take has been often double that of last season. So that, beginning outside the river mouth, and going to Hadley Falls, the fishery would read: *good; very bad; very good.*

Now, whatever may be herein obscure, one thing, at any rate, is clear; namely, the unequal way in which the migratory fish of this river fall into the nets at different points: because, throwing the pounds out of consideration, we find that the first nets are not, so to speak, first served; on the contrary, they get very little, while the upper nets get more than usual. And this falling off of the lower nets is not peculiar to this year or the last, but has been a growing trouble for some time. (See tables on page 20.)

To account for such a state of things there are many hypotheses; and it will illustrate the topic to mention one or two. It may be that the schools of shad which intend to push far up, strike straight at the mouth and come (as they say of menhaden) "sunk," that is to say, swimming deep, so that they pass below the nets. This supposition gets some color from the fact, that even at Hadley Falls, hundreds of fish are taken as bright and hard as if immediately from salt water. Again, it may be that the schools which only frequent the estuary or lower river (just like "river alewives") strike the shore outside, and west of, the mouth, and, as they loiter along, fall into the numerous pounds. Mr. Rankin went so far as to think, that the fish, confused by these barriers, spawned in the brackish, tidal water, and no more entered the estuary for that purpose, as had been their wont.

As to the yield for the last two seasons, three pounds in Westbrook averaged in 1868, 10,956 shad; only one pound was returned for 1869; that one was in Old Saybrook, and took 15,503 merchantable shad. Two "pier seines" near the mouth of the river made returns, as follows:—

	1868.	1869.
Mr. K.'s seine, . . .	1,970	1,796
Mr. C.'s seine, . . .	3,581	2,018

Within the Massachusetts line, the two years compare as follows:—

	1868.	1869.
Agawam,	946	2,163
Longmeadow, . . .	992	1,876
Springfield, . . .	3,865	6,651
Hadley Falls, . . .	7,341	8,807

By the kindness of Mr. O. H. Kirtland, of Old Saybrook, we have received returns, for *forty-one years*, from a pier-seine, near the mouth of the Connecticut, and the figures are given in the table below:—

Shad caught by seine, at Parsonage Pier, annually since 1827.

1827,	3,091	Average for first ten years, 10,376.
1828,	.	.	.	.	.	.	.	10,716
1829,	.	.	.	.	.	.	.	7,138
1830,	.	.	.	.	.	.	.	3,917
1831,	.	.	.	.	.	.	.	9,064
1832,	.	.	.	.	.	.	.	11,813
1833,	.	.	.	.	.	.	.	8,670
1834,	.	.	.	.	.	.	.	14,934
1835,	.	.	.	.	.	.	.	23,376
1836,	.	.	.	.	.	.	.	11,050
1837,	9,096	Average for second ten years, 9,332.
1838,	.	.	.	.	.	.	.	8,734
1839,	.	.	.	.	.	.	.	9,029
1840,	.	.	.	.	.	.	.	7,236
1841,	.	.	.	.	.	.	.	8,727
1842,	.	.	.	.	.	.	.	7,230
1843, (water low,)	.	.	.	.	.	.	.	3,415
1844,	.	.	.	.	.	.	.	11,038
1845,	.	.	.	.	.	.	.	16,019
1846,	.	.	.	.	.	.	.	12,798
1847, (1848 wanting,)	13,690	Average for five years, after closing the Holyoke dam, 19,490.
1849,	.	.	.	.	.	.	.	19,410
1850, (water high,)	.	.	.	.	.	.	.	20,401
1851,	.	.	.	.	.	.	.	25,227
1852,	.	.	.	.	.	.	.	14,257
1853,	.	.	.	.	.	.	.	18,158
1854,	10,148	Average for next ten years, 8,364.
1855,	.	.	.	.	.	.	.	8,236
1856,	.	.	.	.	.	.	.	13,940
1857,	.	.	.	.	.	.	.	8,826
1858,	.	.	.	.	.	.	.	9,826
1859,	.	.	.	.	.	.	.	7,846
1860, (water low,)	.	.	.	.	.	.	.	2,045
1861,	.	.	.	.	.	.	.	10,654
1862,	.	.	.	.	.	.	.	6,449
1863,	.	.	.	.	.	.	.	5,675
1864,	5,491	Average for last six years, 4,482.
1865,	.	.	.	.	.	.	.	10,672
1866, (water low,)	.	.	.	.	.	.	.	2,100
1867,	.	.	.	.	.	.	.	4,864
1868,	.	.	.	.	.	.	.	1,970
1869,	.	.	.	.	.	.	.	1,796

The average, natural yield of this fishery seems to have been about 10,000 shad annually, which is the number the first ten years. The second ten years show a decrease of ten per cent., owing, perhaps, to the increased fishing in the neighborhood. This brings us to the closing of the Holyoke dam, whereupon we have, for five years, a surprising annual catch of *nearly double* the average of the first ten years; but, *after* this, the catch suddenly falls off. Now, it is to be remembered, that our theory gives three years for a shad to become a merchantable fish, and about five years to attain its maximum growth. What then were the generations of fish belonging in the river when that dam was closed? There were the *full-grown* fish (some of which had bred in the extensive grounds *above* the dam) and there were four successive crops of younger fish, the smallest of which would not get their full size for four years. In 1849, the schools, pushing for the upper waters, were stopped by the dam, and, returning down the river in confusion, were taken in great numbers at all points. The alewives of the Merrimack did the same when the Lawrence dam was closed. This would last so long as the columns were recruited by the younger fish, namely, for about five seasons in all; and so exactly it happened. The average for the ten years succeeding this period of five years is only 8,364, or eleven per cent. less than the corresponding period immediately *before* the five years. Finally, the last six years show a decline of nearly fifty per cent. compared with the ten years preceding. Considering the better results to be found on the *upper* part of the river, we incline to attribute the late falling off in the estuary fisheries chiefly to the increase in the number and extent of the pounds.*

To obviate this difficulty, the Connecticut Assembly, in 1868, passed a law (Report for 1868, p. 31), limiting the mesh of pounds to five inches, and directing them to be kept open from sunset of Saturday to sunrise of Monday. Of course, this was a loss to the pound-men, who therefore petitioned the last Assembly to repeal the Act. The Committee on Fisheries

* Additional information has enabled us better to discuss the state of these fisheries. The same general indications were given last year, though from inferior material. The table on p. 12, Rep. for 1868, gives an average for fish taken, for the first three years, of 9,841; for the next ten years, of 6,702; and for the last five, of 4,713.

appointed the 26th of last May to examine some of the pounds, and met the Connecticut Commissioners, and one of those from Massachusetts, at Westbrook. One pound had been set with a two-and-a-half inch mesh, in order to show if many half-grown shad were thus captured. The yield of the haul was estimated at 6,000 or 7,000 fish, and showed a proportion among the different species quite unlike that observed in the pound examined near the Saybrook lighthouse the previous season (Report for 1868, p. 14).

The following table will show the difference:—

	Large Shad	Small Shad.	Hickory Shad.	Alewives.
Saybrook pound, May 20, 1868,	Many.	Very many.	Few.	None.
Westbrook pound, May 25, 1869,	Many.	Few.	Few.	Many.

	Herring.	Menhaden.	Tautog, Weak-fish, Rays, &c.
Saybrook pound, May 20, 1868,	Very many.	None.	Few.
Westbrook pound, May 25, 1869,	None.	Very many.	Few.

Hence, it appears that, whereas the Saybrook pound yielded a great quantity of small shad and sea-herring (*Clupea elongata*) and no alewives at all, the Westbrook took abundance of menhaden and alewives, but no sea-herring, and only a few small shad. Whether these differences are owing to the place, or to the season, cannot be told without thorough returns of fish taken from all that part of the coast. In the present state of our knowledge, we must modify the conclusions of last year, so far as to say that pounds sometimes do, and sometimes do not, take large quantities of immature shad.*

* We hasten to correct a geographical error in the last report, caused by an imperfect map. It was there said that there were *twenty-six* pounds between Saybrook Light and Cornfield Point, a distance of five miles. The point was Mononnesuc, and the distance nearly ten miles. This correction is particularly made in reference to the testimony of the fishermen, which was there called in question. The general fact of the great number of pounds, within this short space, still remains; and it should be added that some stretch over a mile into the Sound; and are *double*, that is to say, they have one "bowl" at the very end of the leader, and one about half way out. And we repeat, that some of the

The damage they are responsible for is twofold : first, when the mesh is too small, they destroy many immature fish ; and, secondly, by their length, position and number they act as so many fences to shut out the schools of shad from the mouth of the river, where they naturally would go to spawn. The Connecticut Act is, therefore, an excellent one, and, as it turns out, is much more beneficial to the *estuary* of the river than to the upper waters within Massachusetts. It was a real pleasure to witness the hauling of a five-inch-mesh pound, and to see three or four hundred magnificent fish taken out, without admixture of inferior ones. Some of these pounds took over seven hundred great shad, in a day, during this season ; and four hundred was quite common.

By chapter 984 of Acts of 1869, the taking of shad is limited to the interval between March 1 and June 15, under a penalty of five dollars for each fish. Moreover, during the spring and summer, no net can be used on our chief rivers, or their tributaries, having a mesh of less than five inches (see Appendix).

(3.) *Of the Smelt (Osmerus viridescens).*—As people have been inclined to wonder at the fresh-water smelts of Jamaica Pond, the experiment was last spring repeated, by putting a number of mature specimens in Flax Pond, in Wareham, a water already noted as the first that received the black bass, in 1850. This autumn, great shoals of little smelts have been seen about the edge of the pond, showing the success of the attempt up to the present time. The law of the last session (chapter 384, § 31) protects this species from *nets*, between the fifteenth day of March and the first of June, under the penalty of twenty-five cents for each fish. Such protection is enough to insure its increase. It looks as if the law of 1868 had already increased the smelts, for there was a good run of them, this autumn, into Back Bay, and quite out to Brookline. The mill-dam was lined with patient anglers ; and distinguished

testimony given by the pound-men, in 1867, as to the sorts of fish taken and the general effect of pounds, was of a kind to mislead. This is not extraordinary, when we reflect that they had a good deal of money there invested, and that they were hard-working men who thought they were entitled to all fish they could catch. Moreover, many of them cannot distinguish certain fishes apart, although they *think* they can. Thus, one of the most intelligent among them deliberately confounded an alewife with a sea-herring. They also are positive that shad get their full size in one year (some remaining *small*, others getting *big!*), but have not a single fact to bring forward to confirm the theory.

merchants, of lower Beacon Street, might be seen, at early hours, eagerly catching their breakfast from their back doors.

The Commissioners endeavored to get the spawn of the so-called "Belgrade smelt," which is a purely fresh-water species, and which often attains the great length of nine or ten inches. Mr. John Shields was sent to Sidney, Me., in the middle of April, and he, in company of Mr. Atkins, worked hard to get spawn. A quantity was brought back, some artificially, and some naturally, fertilized; but all of it died—an unhappy result, to be attributed, probably, to a sudden warm spell at that time. Mr. Atkins succeeded in hatching a few in Maine. This singular fish breeds in intensely cold brooks, as the following figures will show:—

April 15th,	.	.	.	Air 50°.	Water 34°.
" 16th,	.	.	.	" 41°.	" 32°.
" 17th,	.	.	.	" 50°.	" 32°.

The ova, as in the common smelt, are furnished with a viscid coat, which glues them, in masses, to stones and twigs. Where a single egg is thus attached it is seen to be fastened by a sort of pedicle.

(4.) *Of the Salmon (Salmo Salar).*—Of the young hatched in the winter of 1867 and 1868, at Meredith, N. H., 4,000 or 5,000 were turned out last May in an affluent of the upper Pemigewasset. These were the property of the New Hampshire Commissioners.

In the late autumn of last year (1868), about 100,000 salmon ova were sent by Mr. Stone, from his establishment on the Miramichi, to Messrs. Robinson & Hoyt, at Meredith, for the joint account of Massachusetts and New Hampshire. Of these eggs, rather less than one-half (about 46,000) were impregnated, and this seems about as good a result as can be obtained at such a distance and in the face of difficulties. Of the fry, a certain number died before the absorption of the yolk-sac—a period of hazard to all embryos which have been exposed to injury from handling, packing, or transportation. They began to feed in April, and did well till about the middle of June, at which time a severe mortality attacked them and destroyed a large number. This was a sort of consumption. The little things would not, or could not, feed; grew emaciated, so that

the head seemed disproportionately large, and, at last, swam round on the surface of the water, often on their sides, and so died. A similar disease afflicted the trout at the State hatching-house, in May. Mr. Ainsworth thinks that ova artificially fecundated do not produce so healthy fry as those by the natural process, and doubtless this is true; but the theory does not account for this particular complaint, because young salmon, also from the Miramichi, have remained very healthy, at the State hatching-house, ever since the absorption of the yolk-sac. The unexampled freshet of October was another cause of loss, by the sudden washing out of some of the little fish, though it is likely that a portion of them thus lost passed down into Lake Winnepiseogee, whence they easily can go to the sea. The number now in the rearing-boxes is estimated at 15,000; that is to say, about one in six of the eggs received, or about one in three of those impregnated. With all the difficulties of distant transportation, and of want of knowledge, this is better than the estimated result of *natural* breeding given by English writers.

At the State hatching-house, the young salmon proved more hardy after the absorption of the yolk-sac than any of the other trouts. Between 7,000 and 8,000 eggs were received from Mr. Stone between November 30 and January 12, and were put in the troughs. These were constructed in the usual way (see Report for 1867, p. 29), except that the sides were of thin slate slabs, and the bottom of white glazed tiles, whose surface was divided into diamonds by little ridges. Such tiles answer admirably, but their cost is a great objection. The little frames with net bottoms, contrived by Mr. Brackett, are still in use, and are excellent* (Report for 1868, p. 18). If a very cheap trough be wanted, the best material is charred boards, which have been successfully used by Rev. Livingston Stone. One thing is certain, as a general principle, and that is, all gravel, stones, or other material on the bottom of the trough, are merely dirt-catchers, and do no good at all. If there is current enough to move the eggs on a smooth surface, there is *too much*.

* It would seem that not only these frames, but also Ainsworth's spawning-bed, were originally used by the French.

The little cross-dams between the tiles were made of common thick window-glass. The supply of water, a vital point, is excellent. It is a spring brook, which heads about three hundred yards above the house, and receives numerous little springs on its course, which is well sheltered by ferns and brush. It discharges about 825 gallons a minute, or nearly 1,200,000 a day. A portion is allowed to flow under the floor of the house, which affords a convenient tank for the large fish, and renders the house much warmer in winter. During the past year, the temperature of the water, and of the air, inside and outside the house, has been taken daily. These observations are not remarkably accurate, but sufficiently so for general purposes. They were made with a common thermometer, usually at about nine A. M. A few days will be found wanting, but not enough to affect the general result. The following tables show the figures for each day :—

	Water.	AIR.			Water.	AIR.			Water.	AIR.	
		In.	Out.			In.	Out.			In.	Out.
1868.				1868.				1869.			
Dec. 1,	47	40	—	Dec. 28,	46	36	32	Jan. 21,	44	34	24
2,	46	32	29	29,	41	31	17	22,	44	35	18
3,	46	34	34	30,	45	47	24	23,	42	24	18
4,	44	32	—	31,	42	34	29	24,	45	34	32
5,	47	39	31					25,	45	40	36
6,	47	40	34	1869.				26,	42	31	18
7,	47	40	35	Jan. 1,	45	37	30	27,	43	28	24
8,	47	41	37	2,	45	37	30	28,	48	38	36
9,	46	38	29	3,	48	46	40	29,	44	34	31
10,	44	30	28	4,	46	40	38	30,	48	44	48
11,	43	29	21	5,	48	44	40	31,	48	40	38
12,	45	32	27	6,	45	38	32	Feb. 1,	47	35	30
13,	45	32	32	7,	44	38	32	2,	47	30	22
14,	46	34	30	8,	45	37	23	3,	46	37	35
15,	45	32	23	9,	46	42	42	4,	45	40	30
16,	46	34	24	10,	48	46	42	5,	44	34	24
17,	47	40	38	11,	45	34	30	6,	46	38	36
18,	47	42	40	12,	46	40	38	7,	48	46	45
19,	47	30	14	13,	45	36	27	8,	48	29	9
20,	46	33	33	14,	46	35	33	9,	49	42	35
22,	45	48	33	15,	46	36	34	10,	48	41	37
23,	44	34	29	16,	46	37	32	11,	48	41	40
24,	44	33	15	17,	44	32	28	12,	49	41	40
25,	42	25	7	18,	46	36	32	13,	48	49	50
26,	44	32	20	19,	45	36	24	14,	48	42	46
27,	42	32	21	20,	44	30	28	15,	48	48	50

	Water.	AIR.			Water.	AIR.			Water.	AIR.	
		In.	Out.			In.	Out.			In.	Out.
1869.				1869.				1869.			
Feb. 16,	46	42	38	Apr. 9,	48	46	43	May 31,	56	78	62
17,	48	48	41	10,	47	42	37	June 1,	52	59	68
18,	48	46	42	11,	45	36	34	2,	54	60	70
19,	48	45	33	12,	47	44	40	3,	53	62	70
20,	45	34	35	13,	50	42	44	4,	54	66	71
21,	48	50	42	14,	46	42	40	5,	52	64	69
22,	48	42	44	15,	48	43	41	6,	53	68	72
23,	47	42	39	16,	47	40	42	9,	54	70	73
24,	45	40	29	17,	48	42	47	10,	53	65	70
25,	45	41	33	18,	48	42	50	11,	52	62	71
26,	46	40	34	19,	49	50	52	12,	53	68	73
27,	45	40	30	20,	50	55	60	14,	53	62	71
28,	45	37	24	21,	50	56	58	15,	52	62	62
Mar. 1,	43	28	24	22,	48	50	52	16,	56	62	70
2,	46	32	23	23,	49	50	52	17,	56	66	76
3,	48	42	40	24,	51	68	65	18,	53	64	80
4,	47	40	39	25,	49	58	56	19,	53	76	86
5,	42	32	9	26,	52	58	67	20,	52	68	72
6,	45	34	28	27,	51	56	68	21,	54	74	68
7,	44	31	21	28,	50	48	56	24,	53	69	80
8,	45	31	27	29,	48	50	40	26,	53	70	72
9,	46	38	39	30,	52	64	56	27,	53	68	70
10,	47	38	40	May 1,	45	36	30	28,	53	68	76
11,	49	46	45	2,	47	43	42	29,	53	68	72
12,	46	36	34	3,	50	48	44	30,	53	66	68
13,	46	38	36	4,	48	44	42	July 1,	53	70	76
14,	48	46	42	5,	51	50	50	2,	52	71	77
15,	46	36	32	6,	50	50	46	3,	53	68	74
16,	45	33	22	7,	50	51	49	4,	54	72	82
17,	46	35	30	8,	51	55	56	5,	53	70	75
18,	44	34	28	9,	49	51	59	6,	52	68	72
19,	48	34	38	10,	50	49	62	7,	52	67	71
20,	47	38	37	11,	54	72	64	8,	52	70	78
21,	45	38	21	12,	50	49	58	9,	53	72	79
22,	45	37	32	13,	54	64	74	10,	53	71	82
23,	47	38	40	14,	52	58	62	11,	52	68	80
24,	52	50	44	15,	53	53	57	12,	52	70	80
25,	48	38	44	16,	56	68	74	13,	52	69	79
26,	48	43	48	17,	54	68	64	14,	52	68	78
27,	48	44	54	18,	54	68	68	15,	52	70	79
28,	52	56	55	19,	51	61	59	16,	52	70	80
29,	48	46	48	20,	52	60	54	17,	52	66	76
30,	48	47	46	21,	53	62	56	18,	53	68	76
31,	48	44	41	22,	52	69	59	19,	53	74	78
Apr. 1,	52	60	56	23,	54	69	59	20,	54	73	79
2,	48	44	42	24,	56	66	66	21,	53	76	76
3,	47	43	41	25,	51	59	66	22,	53	80	78
4,	45	38	30	26,	52	60	76	23,	54	78	78
5,	47	38	42	27,	52	58	68	24,	53	72	80
6,	48	37	41	28,	53	56	68	25,	55	78	85
7,	50	39	48	29,	54	66	68	27,	55	78	84
8,	48	46	42	30,	52	62	68	28,	54	76	80

		Water.	AIR.				Water.	AIR.					Water.	AIR.	
			In.	Out.				In.	Out.					In.	Out.
1869.					1869.					1869.					
July	29,	53	78	84	Sept.	15,	54	67	72	Oct.	24,	50	58	60	
	30,	55	78	84		16,	53	69	74		25,	49	42	40	
	31,	54	76	81		17,	54	70	75		26,	48	40	38	
Aug.	1,	53	76	80		18,	54	72	-		27,	47	45	43	
	2,	53	74	78		19,	55	74	-		28,	46	39	37	
	3,	52	73	79		20,	55	75	85		29,	47	43	43	
	4,	52	72	79		21,	52	70	74		30,	48	46	40	
	8,	52	71	78		22,	54	68	70		31,	48	46	42	
	9,	52	75	75		23,	54	64	70	Nov.	1,	48	46	42	
	10,	52	72	78		24,	54	66	69		2,	48	52	46	
	13,	53	76	80		25,	53	68	72		3,	46	46	49	
	14,	54	76	81		26,	53	72	74		4,	48	52	52	
	15,	55	75	80		27,	54	64	60		5,	48	52	52	
	16,	54	76	82		28,	51	62	52		6,	48	42	51	
	17,	52	68	74		29,	52	60	65		7,	48	42	38	
	18,	52	62	64		30,	53	65	68		8,	46	38	34	
	19,	51	62	63	Oct.	1,	54	68	70		9,	48	40	40	
20,	52	62	62	2,		53	64	72		10,	46	45	41		
21,	55	78	90	3,		53	74	82		11,	48	45	40		
22,	53	75	82		4,	53	74	78		12,	46	40	46		
23,	52	72	79		5,	51	70	70		13,	46	41	37		
24,	52	73	80		6,	50	52	50		14,	48	40	40		
27,	53	74	81		7,	51	54	55		15,	47	40	36		
29,	54	76	83		8,	51	57	59		16,	44	34	30		
30,	54	76	84		9,	49	51	50		17,	46	40	40		
Sept.	1,	55	65	60		10,	50	57	60		18,	46	42	40	
	2,	52	62	68		11,	51	51	70		19,	45	42	42	
	3,	53	62	69		12,	50	64	70		20,	40	43	45	
	4,	54	68	70		13,	51	61	62		21,	46	44	36	
	5,	55	70	78		14,	51	60	70		22,	47	42	38	
	6,	54	70	82		15,	50	60	68		23,	46	40	38	
	7,	55	72	85		16,	49	51	54		24,	46	41	40	
	8,	53	75	81		17,	52	62	60		25,	46	40	36	
	9,	55	75	70		18,	49	52	51		26,	46	36	34	
	10,	53	70	64		19,	48	46	47		27,	47	38	37	
	11,	54	65	68		20,	49	47	48		28,	45	40	34	
	12,	54	68	70		21,	49	50	52		29,	47	38	38	
	13,	54	69	72		22,	49	53	53		30,	48	32	32	
	14,	55	67	73		23,	48	54	56						

Mean Temperatures.

	Air outside.	Water.		Air outside.	Water.
1868.	Deg.	Deg.	1869.	Deg.	Deg.
December, . . .	27.3	45.1	June, . . .	72.1	53.2
1869.			July, . . .	78.7	53.
January, . . .	31.5	45.5	August, . . .	78.	53.1
February, . . .	35.4	46.9	September, . . .	71.	53.7
March, . . .	35.7	46.	October, . . .	56.2	49.8
April, . . .	48.	48.6	November, . . .	39.8	46.5
May, . . .	59.	51.1	Mean for 12 m'ths,	52.7	49.4
Highest air, August 21, 90°					
Lowest air, December 25, 7°					
Difference, 83°					
Highest water, June 16, 56°					
Lowest water, December 29, 40°					
Difference, 16°					

Though the air outside varied 83° during the year, and the water only 16°, the mean *annual* temperature of air and water differs but 3.3°. It is, therefore, probable that the mean annual temperature may be got pretty nearly, in these latitudes, by testing a cold spring and making a small correction for summer or winter. If this rule holds good, it would afford a rapid method of laying down approximate isothermal lines. As the salmonidæ (when not in the sea) all like spring water, it would be proper to say of them, not that they enjoy *cold* water, but water that varies little; because, in winter, they seek relatively *warm* water, that is to say, of a temperature of 45°, while the common pond water may barely be over 32°. By following successive figures it will be observed that, although, on the whole, the water is coldest in cold months and warmest in warm months, it by no means regularly follows the air. To take an instance: on January 8, the air *fell* 9°, while the water *rose* 1°. On December 19, the air fell 26°, while the water remained steady. On November 20, the water *dropped* 5° (!) the air *rose* 1°. The *next* day the water *rose* 6° (!) and the air *fell* 9°. Now what were the conditions on November

20 ? There was the greatest general gale of the whole year ; a gale that began as far west as Cheyenne, and drove east with great fury. The same is true of the more *local* hurricane of September 8. The water then fell 2° ; the air only 4° . The next day the air had *fallen* 11° , the water *risen* 2° . The man who took the observations is confident that the temperature of the water always falls before a storm ; but, as this fall is often complicated by the variation of the air, there is often difficulty in distinguishing between the two. Of course, no reliable results could be obtained but by long and minute observations with very accurate instruments, and the above figures are given rather as curious than as having scientific value. Although the extreme variation in the water amounts to 16° in comparing days, the variation in comparing the mean temperatures of months is only 8.6° . This is the most favorable condition for the trouts ; and yet, if the water be in *rapid motion*, they will sustain a temperature of 80° for days together.

Of the eggs received from the Miramichi river over one-half were defective, the most of which had failed of impregnation so that the eggs that hatched were as follows :—

Salmon eggs received,	.	.	.	.	7,600
“ “ defective,	.	.	.	.	4,280
					<hr/>
Hatched,	.	.	.	.	3,320

This large proportion of unimpregnated eggs is always seen where they are stripped from wild fish. The pressure brings out not only the ripe eggs lying loose in the visceral cavity, but many that are still attached to the ovary and are not ripe.

Of the “ *St. Croix land-locked salmon* ” about 5,000 eggs were received from Mr. Ch. G. Atkins, commissioner of Maine, who collected them under extreme difficulties. It is, therefore, not surprising that only about one-third hatched.

Land-locked salmon eggs received,	.	.	5,400
“ “ “ “ defective,	.	.	3,600
			<hr/>
Hatched	.	.	1,800

The true and the land-locked salmon were kept separate, and before the absorption of the yolk-sac, were easily distinguished by the color of the oil-drops of the yolk, which were of a bright blood red, or of a light grass green in the land-locked, while, in the true salmon, they were of a fine orange. But, after they had entered the parr stage it was nearly impossible to recognize the two. Some meddlesome person having knocked down the separating partition, nearly all the salmon passed down and mixed with their kindred, after which it was quite impracticable to sort them out. Indeed a comparison side by side, of over a hundred, failed to show specific differences. They were, therefore, henceforth reckoned together, and their account to the end of October from the time they were hatched, (about the middle of January,) was as follows:—

Whole number of eggs hatched,	5,120
Young died,	420
	<hr/>
Living,	4,700

Of those lost, many were destroyed by accidents, one hundred being killed at a time by a quantity of gravel which was washed over them. Of the rest, the greater part were lost during the yolk-sac period. But, reckoning all together, it seems that 92 per cent of those hatched were brought to the age of nine months. Nevertheless, although perfectly healthy and feeding heartily, these parrs grew very slowly, and, on the first of September, they did not average more than one and a half inches long. Most of them were then taken from the hatching-trough, where the water was about four inches deep, and put in a long trench with a foot of water and plenty of room. Here they grew rather better, and by the end of October, a large part of them attained a length of three inches. But they never got to the size of the trout, and this has been the experience in all the establishments. About 1,700 true salmon were hatched at the establishment of Messrs. Dexter, Coolidge and Bacon, at West Barnstable, and these, from the middle of May to the last of November, lost but little over 4 per cent. of their number, which is a fraction greater than the loss at the State hatching-house. Their growth was quite remarkable, some having attained five

inches at the end of November, whereas the largest at the State place would not exceed three and a half inches. This growth was owing, perhaps, partly to their removal, early in June, to water two feet deep, and partly to their regular and careful feeding. The gentlemen, who own the Barnstable springs, are persons of education and experience, and they have made their hatching-house a thing of close study. As a result their success has been really brilliant. They have raised over 20,000 young trout from the egg, last year, with a loss of only 5 per cent. in the last six months. A good part of these fish are now, at the age of nine or ten months, 6 inches long, and some are even larger. They have a handsome stock of breeders, and have taken over 100,000 spawn, with Ainsworth's artificial bed, during the present season. The 20,000 or 25,000 little fish consume two beef livers per week, which is fed to them in the usual way, chopped fine. This seems the best food yet used, although clotted milk answers well to begin with. About an equal number of salmon eggs were also hatched by Mr. Brackett, and these have made a fair growth and have remained remarkably healthy.

Of Trout (Salmo fontinalis) only a few (less than 4,000) were hatched, and these were experimented with in various ways—a course which entailed loss, but which was instructive. It was in the first place found that the eggs require very little change of water. A stream the size of a quill is ample for a trough two feet wide and sixteen feet long; and too violent a flow may even kill the eggs. As soon as hatched, the embryos like a little more current; and, in seeking this and endeavoring to conceal themselves, they pile up, one on top the other, like slates on a roof. It is then that they endeavor to squeeze themselves into cracks and holes, whereby many may kill themselves. As soon as the yolk-sac is gone, the weakly fry, now swimming free, require a very gentle current; otherwise they get exhausted and are carried against nettings or other objects, where they die. Simple upright brass nettings were at first tried for separating and confining the fry; but they were killed in numbers by this contrivance, and would even strand themselves on piles of gravel arranged to moderate the flow. The best thing is a *horizontal* netting, so arranged that the water, in escaping, must slowly pass *upward* through it. Most of the trout were hatched from the spawn of the small, white-meated,

New Hampshire trout. But there were also a few of the fine, red-fleshed Cape Cod trout, and these were perfectly distinct by their darker color and more robust form. In fact, there was very much more difference between these two varieties, than between the true and the land-locked salmon. All remained remarkably healthy till May, when a certain number were observed to be weakly. They grew thin and their heads seemed large, and soon they died. It is likely that they were naturally sickly, and when the yolk-sac was gone, they had not enough vitality to feed; in a word, they died in *weaning*. About 200 thus were lost. They then again thrived till the beginning of July, when they were attacked by a mysterious disorder which swept away 350 in three weeks. Perfectly robust fish were attacked by it; they exhibited signs of distress; the bars on the body grew darker and they soon died with the mouth open, as if asphyxiated. The viscera were perfectly healthy. Plainly it was not the direct effect of want of air, for then *all* would have died at once; moreover, these same fry, when about one and a half inches long, were once accidentally left for twelve hours, with the water *shut off* entirely; yet not one died. There were then 5,000 fish in 25,000 cubic inches of water, or five cubic inches to each fish. Nevertheless, the quality of the water had something to do with it; for they often revived when timely removed to the brook, and the mortality ceased when they were put in a runway. It is therefore safe to say that all fry should be removed to deep runways by the first of June. The lake trout were attacked in exactly the same way, but the salmon, under identical conditions, were entirely healthy. The trough, so long as they stay in it, should be kept perfectly *clean*; and nothing should be put in except a few bits of clean moss, in which they like sometimes to rest, or rub themselves. These fishes were not very heavily fed, and they therefore did not exceed four inches, for the largest, at the end of October: this is a little larger than the wild fish in the brook, at the same time. The following will give an idea of the result:—

Eggs hatched,	3,600
Died of the May disease	200
“ of the July “	350
Killed against nettings, &c.,	150
Died from ordinary causes,	235
	<hr/> 935
Living, November 1,	<hr/> 2,665

About 75 per cent. of those hatched were, therefore, raised to the age of nine months, but, with the improved treatment indicated above, 90 per cent. should be a minimum, and this has been attained by the gentlemen of West Barnstable. When the fry are placed in open runways, care must be taken, not only to exclude pickerel, by nettings at the upper and lower ends, but other enemies also, notable among which are frogs, which must be slain without quarter. Water snakes, also, seize the adult fish, and they have been killed with a four ounce trout in their stomach, and another between their teeth. These snakes are viviparous, bringing forth twenty or thirty young early in October. They are exceedingly numerous about some bushy trout brooks, and have a most repulsive appearance, whence the almost hysteric terror with which the country people often regard them.

The breeders in the pool came on the artificial bed and began to spawn on the twentieth of October; and they had not finished by the first of December. The gravel of the bed should be very coarse; in fact, large pebbles are best; otherwise the fish throw them in every direction. At this season—in fact, as early as September—the flesh of the female sea-trout was found to have faded, from a red deeper than that of the salmon, to a faint pink; it is not unlikely that a portion of the coloring matter is taken up by the blood and conveyed to the eggs, which are sometimes almost as bright as those of salmon.

Of the Togue or Lake Trout (Salmo toma), Messrs. Robinson and Hoyt, of Meredith, N. H., forwarded 5,400 impregnated eggs from Lake Winnipiseogee in December. It was the received opinion that these eggs must be hatched in still water; because this trout is a bottom fish, and one of such secret habits, that it has existed many years in lakes without

being discovered by the inhabitants. Accordingly, nearly one-half were put in the supply box, but with disastrous results, for the majority of them died before their condition was discovered. Those in the trough hatched perfectly. No sooner have they passed into the fry state, than these little creatures assert their species by swarming on the *surface* of the water, whereas the true trouts then swim midway between top and bottom, and the salmons lie still lower, often resting motionless on the bottom for hours together. So well marked is this peculiarity, that, if five hundred brook and lake trout are thrown together into a bucket of water, within two minutes every one of the latter will be in the upper third of the water; every one of the former in the lower two-thirds. The little "lakers" are, moreover, much heavier in their motions and more tame. Their growth is more rapid, also. They are hardy and easily raised and would prove a valuable pond fish.

Eggs received,	5,400	
Destroyed, by wrong treatment, &c.,	2,950	
Hatched,	—	2,450
Died of the July disease,	150	
" of accidents,	75	
From other causes,	325	
	—	550
<hr/>		
Living, November 1,		1,900

So that, with all errors of treatment, nearly 80 per cent. of those hatched were raised.

Of the Black Bass (Grystes fasciatus.) Several ponds and one river (the Concord,) have been stocked with this valuable fish during the year, some at the State expense, others at that of private persons. Mr. Tisdale has also been able to supply a large number to the Connecticut commissioners.

Of the White Fish (Coregonus albus.) It is a source of much regret that all the eggs collected last year failed. The commissioners both of New York and New Hampshire have this season taken the matter in hand, and we shall hope to profit by their experience.

Of the Wall-eyed or Glass-eyed Pike (Lucioperca.) Rev.

Livingston Stone went in April to the head of Lake Champlain, at Missiquoi River, on purpose to get this species, or its eggs. He found that it could not be transported alive, and, owing to the floods, he failed to get any impregnated eggs. His observations were, however, of value, and will avail on some future occasion. The temperature of the water was as follows:—

April 29,	.	.	.	.	.	.	44°
May 9,	.	.	.	.	.	.	49°
“ 11,	.	.	.	.	.	.	49°
“ 13,	.	.	.	.	.	.	54°
“ 14,	.	.	.	.	.	.	52°

Some spawn of the common yellow perch was mixed with milt of the glass-eyed pike, and to judge from Mr. Stone's sketches and observations, a certain development of the embryo followed up to the seventh day, but not beyond that, and the embryo never showed movement. The spawn of the perch comes in a ribbon about two and a half inches wide, made up of gluten, like that of frog eggs. It is easily impregnated; the eyes show on the eleventh day, and the fish hatches in about twenty-five days. The ripe males first appeared. The first ripe female was May 1, and all seemed to have spawned by May 6. The spawn of the Sucker, (*Catostomus*), comes in a yellow flabby mass. The eggs are no larger than a pin's head, but speedily absorb water and swell to the size and appearance of those of the shad, (about $\frac{1}{8}$ inch.) Of all common fresh-water fishes their ova have least specific gravity, and the shell is so soft that they cannot be packed. They spawn in the first third of May. To add to this list we will state that our horn-pout, (*Pimelodus*) spawns in September, in Massachusetts. Mr. Stone found the pickerel ripe in the beginning of May. This fish, to its other disagreeable and contrary qualities, adds the tendency to multiply females, whereby the spawn crop is increased. Among many individuals examined, last spring, it was rare to find a male; not oftener, certainly, than one in fourteen. Their growth seems to vary much according to temperature. In a pond fed by a large spring brook, where there was enough food, but cold water, their growth seemed slow, if we may judge by the pretty regular sizes presented by some hundreds examined, as follows:—

A G E.	L E N G T H.	W E I G H T.
	Inches.	Ounces.
1 year,	4½ . . .	½
2 years,	7 . . .	1½
3 "	10 . . .	4
4 "	13½ to 14½	8 to 12.
5 "	17½ . . .	24
6 "	20 . . .	40

In a large, warm pond, covered with lily-pads, and full of young alewives, pickerel have reached four and five pounds in three years. The fortunate repeal last year of all laws for their protection has furnished much sport to everybody but the pickerel themselves.

Appropriations.—On the first of January, 1869, there was left of the appropriation under chapter 344 of 1868, about \$2,500, and there was appropriated the further sum of \$2,500, under chapter 28, General Resolves of 1869. This money, \$5,000 in all, has been spent for the purposes described in the preceding pages. Of this sum, less than \$300 has been expended for the expenses proper of the three Commissioners; the remainder has been devoted exclusively to fish culture.

The Commissioners beg leave to suggest an appropriation of \$4,000 for the coming year.

All of which is respectfully submitted.

THEODORE LYMAN,
ALFRED R. FIELD,
E. A. BRACKETT,
Commissioners on Inland Fisheries.

APPENDIX.

[A .]

NEW ENGLAND COMMISSIONERS OF RIVER FISHERIES.

MAINE.

CHARLES G. ATKINS,* Augusta.

NEW HAMPSHIRE.

W. A. SANBORN,† Weirs.

W. W. FLETCHER, Concord.

T. E. HATCH, Keene.

VERMONT.

A. D. HAGER, Proctorsville.

CH. BARRETT, Grafton.

MASSACHUSETTS.

THEODORE LYMAN, (Secretary,) Brookline.

ALFRED R. FIELD, Greenfield.

E. A. BRACKETT, Winchester.

CONNECTICUT.

W. M. HUDSON, Hartford.

ROBERT G. PIKE, Middletown.

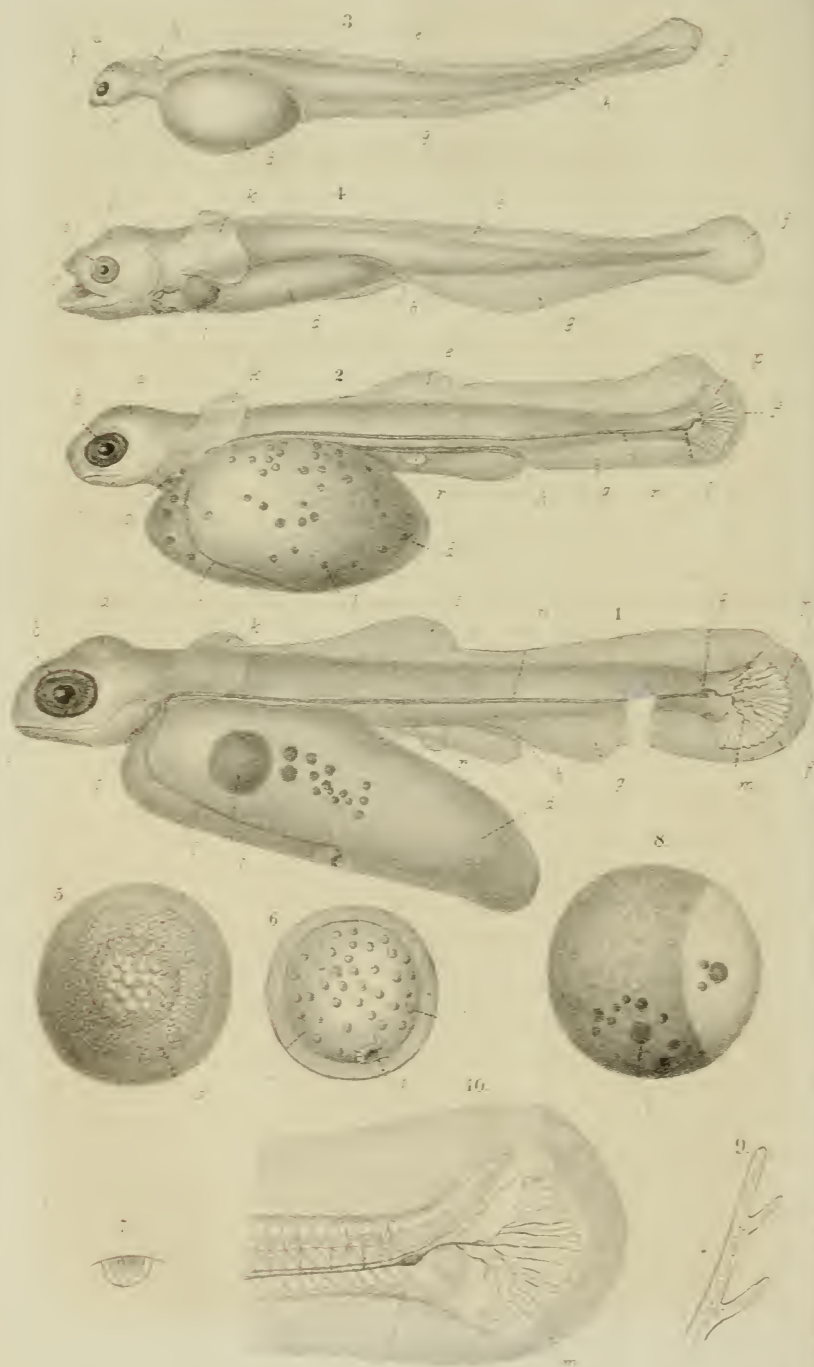
RHODE ISLAND.

ALFRED A. REED, Apponang.

NEWTON DEXTER, Providence.

* We have to record the death in March last of Mr. Nathan W. Foster, inventor of the Foster Fishway. As one of the Commissioners he did great service to his State in restoring the river fishes.

† By his promotion to the Supreme Court, Judge Bellows has been obliged to retire from a field in which he was one of the first and most active workers.



[B .]

EXPLANATION OF THE PLATE.

-
- FIG. 1. St. Croix land-locked salmon, (*Salmo sp. (?)*) Young, one week after hatching, $\frac{5}{4}$.
- FIG. 2. Togue or lake trout, (*Salmo toma.*) Young, about one week after hatching, $\frac{5}{4}$.
- FIG. 3. Shad, (*Alosa praeestabilis.*) Young, just hatched, $\frac{1}{2}$. Reduced from Pl. I., Report 1867.
- FIG. 4. Common yellow perch (*Perca flavescens*) just hatched, $\frac{3}{4}$.
- FIG. 5. Unimpregnated trout egg which has lain 55 days in water, $\frac{5}{4}$.
- FIG. 6. Ripe egg of the common smelt (*Osmerus viridescens*) from the ovary, showing the micropyle, $\frac{1}{4}$.
- FIG. 7. Micropyle of the same, more magnified and seen in profile.
- FIG. 8. Unimpregnated salmon egg (*Salmo salar*) 35 days in wet moss, then fifty days in water, and at last frozen and thawed.
- FIG. 9. Mould or "fungus," (*Conferva,*) which attacks eggs, and wounds on fish. A twig magnified 350 diameters.
- FIG. 10. *Salmo salar.* Salmon. Newly hatched. The tail magnified to show the embryonic blood-heart.

Two years ago, Professor Agassiz discovered in the embryo of our common salmon (*Salmo salar*) a heart carrying red blood, situated under the terminal bend of the vertebral column. The vessels issuing from it ramify in the membranes of the caudal fin, and it receives the blood returning from that organ.

A desire to follow its transformation into the system of the lateral line, with the vessels of which it appears to be connected, though the mode of connection could not be distinctly traced, has prevented Prof. Agassiz from publishing his observations. We are, however, requested by him to mention these facts here, since he has been prevented by illness this year from resuming and completing his investigation.

This caudal heart is easily distinguished under a slight magnifying power through the transparent tissues. It seems to be most active and to acquire its maximum development during the first two weeks following the escape of the embryo from the shell. Its pulsations do not coincide with those of the heart proper.

The pulsations in the true heart of the lake trout (*Salmo toma*) when newly hatched are from 66 to 71 a minute; and this is probably the number for most trouts.

a, brain; *b*, eye; *c*, mouth; *d*, yolk-sac; *e*, embryonic dorsal fin; *f*, embryonic caudal fin; *g*, embryonic anal fin; *h*, anal opening; *i*, yolk vein, which disappears later; *k*, pectoral fin; *l*, oil drops of the yolk; *m*, blood vessels of the tail; *n*, main vein and artery of the body; the latter lies above, next the chorda dorsalis, the former, below; *o*, the heart; *p*, rays of tail forming; *q*, embryonic blood-heart in the tail; *r*, left ventral fin forming.

The embryos of four species, representing the Salmonoid, Clupeoid, and Percoid fishes are here shown, side by side, to give a comparison. We see, notwithstanding their great differences, that they have common characters—usually called “embryonic.” Thus they all have a continuous fin running from the forward part of the body, along the back, round the tail, and along the belly to the yolk-sac, (*e, f, g.*) This reminds us of the *adult* state of certain fishes, as, the eels, the hake, and the cusk. Again, all these little fishes possess a yolk-sac, (*d.*) large and pointed in the salmon; large egg-shaped in the togue; small egg-shaped in the shad; long, slender, and cylindrical in the perch. The yolks of three of the four have oil drops easy to be seen; large and clustered in the salmon, small and dispersed in the togue; and forming one globule in the perch, (*i.*) The pectoral fin is, in all, separate, fully indicated, and of considerable size. It is the fanning of this organ that keeps up the brisk current past the gills of the embryo. In all, the anal opening traverses the substance of the embryonic ventral fin; but, how different its position. In the shad, it opens at the last quarter of the length; in the trouts at the last third, and in the perch, at the middle point and immediately behind the yolk-sac. The mouth is already indicated, but is developed very differently: the salmon, with its great sac of food to nourish it for many weeks has a lower jaw already well marked, but the mouth is constantly closed, or nearly so; the perch, on the contrary, with a slender stock of food on hand, has a strong head and mouth, (*c.*) and the latter is habitually open, ready for food. The shad at hatching has the mouth barely cut through; indeed, it *promises* to have a development as *slow* as that of the salmon, for the features of the fish are excessively embryonic and the yolk-sac pretty large. Nevertheless, it passes through its stages with such rapidity that the artist cannot properly follow them with his pencil. Why its “struggle for life” should be so brisk, does not appear.

Figs. 5, and 8, are given to show the aspect of *unimpregnated* eggs. People often mistake the oil drops, or the partial disintegration of the yolk, for a growing embryo. By comparing *b.* in Figs. 8 and 1, the position of these oil drops will be seen in the egg and in the newly-hatched young. The young perch is further characterized by the fact that the pectorals do not fan *constantly*, but only from time to time. Its blood is colorless; its pulse 120 per minute. The pulse of the salmons and trouts is, in the embryo at the 50th day, from 66 to 71. A newly hatched salmon may be *frozen*, and the heart may *entirely cease to contract*, but, on thawing, it begins slowly to move, at first 18 beats a minute, and within an hour rising to 50. Nothing is more astonishing than to witness this vital action in a creature so transparent that each organ can be seen! The smelt eggs are remarkable for their large micropyle, the opening at which the spermatozoa enter (figs. 6, 7.) A smelt of 3 oz. carries about 51,000 ripe eggs. The *conferva* (fig. 9,) when seen with a low power looks like a confused mass of fine, transparent thread; a twig, under a high power, is seen to be simply branched.

[C.]

LEGISLATION FOR 1869.

THE FISHERY ACT.

The *need* for such a law as this is the same as the need for a law protecting any industry. While on the one hand we recognize the fact that a supply of good fresh-water fishes (among which we class the salmon, shad, trout, alewife, black and striped bass and smelt,) is essential as food for our people, especially in warm weather, when transportation is difficult, we are still compelled to admit that the supply is constantly diminishing, and that some of these fishes are in several localities exterminated. For this deplorable state of things, there is but one remedy, and that is to make fishes, under certain conditions, PROPERTY, and thus give the same stimulus to the cultivation of fish, that is given to the raising of any other live stock. Under the knowledge that we now have the methods of raising food-fishes, such cultivation is just as easy as that of poultry. The needed protection and encouragement are given in the proposed law before you.

As to the *foundations* of this law, they are all to be found either in the ancient charters of the colony, in the General Statutes, or in the decisions of our courts; so that nothing *novel* is presented, but the whole structure stands on time-honored ground-work. In other words, this Act is a natural development of the rights and customs of this Commonwealth.

[Chap. 384.]

AN ACT for encouraging the Cultivation of Useful Fishes.

Be it enacted, &c., as follows:

SECT. 1. All the laws of the Commonwealth relating to the culture, preservation, capture, or passage of fish, shall be known as the laws relating to Inland Fisheries.

SECT. 2. The commissioners, under chapter two hundred and thirty-eight of the acts of eighteen hundred and sixty-six, shall be styled the Commissioners on Inland Fisheries, and shall be a board consisting of three persons appointed by the governor, by and with the advice and consent of the council, each for a term of five years from the time of his appointment. Vacancies in the board by the

expiration of the terms of service of the members, or otherwise, shall, from time to time, be filled in like manner, and for like terms of time.

SECT. 3. Each of said commissioners may personally, or by deputy, enforce all laws regulating inland fisheries; and may seize and remove, summarily if need be, all obstructions to the passage of migratory fish illegally used, except dams, mills or machinery, at the expense of the persons using or maintaining the same.

SECT. 4.* Whenever either of said commissioners finds that that there is no fishway or an insufficient fishway in or around a dam where the law requires a fishway to be kept and maintained, he may, at his discretion, enter with workmen and materials upon the premises of the person or corporation required to maintain said fishway, and may improve said fishway, or cause one to be constructed where none exists, at the expense of said person or corporation, and may take, if necessary, the land of any other person or corporation not obliged by law to maintain said fishway, provided compensation shall be rendered to the owner thereof, in the manner provided in relation to land taken for highways, and said expense shall be a charge against said person or corporation required by law to construct and maintain such fishway, to be recovered in an action of contract in the name of the Commonwealth,

* SECT. 4 empowers the Commissioners to construct a fishway in any dam where the law requires one, and to take land, as is provided for highways, and to require payment for the whole from the dam-owner.

By the old decision in *Stoughton vs. Baker*, (4 Mass. 522,) and by subsequent decisions, it is fully established that every dam-owner on a stream naturally frequented by migratory fishes, holds his dam on condition of maintaining a fishway, any adverse use to the contrary notwithstanding; and he can only be excepted by legislative charter. In some parts of the State this law has been neglected; in other parts it has been carried out.

We now have fishways of a form that uses only the surplus water of the dam-owner, and which may be used without damage to him. This fact, together with the strong interest that had risen in restocking our waters, moved the legislature to pass an Act giving authority to the Commissioners to enforce the law as to fishways, whenever they deemed it expedient, (chap. 344, 1867,) and the above section is but a more precise and full statement of this Act. It is plain that such a law is a benefit both to the dam-owner and to the fishermen, by throwing the administration of the common law into the hands of responsible State officers, whose duty it is to see that the rights and interests of both parties are well guarded. Whereas, without such delegated powers, the fishermen would have recourse to expensive lawsuits, which would lead to loss of time and money, and to ill-blood among neighbors. This is especially true where there are several dams upon the same stream, and where all the owners, but one, are willing to put in fishways, while that one, either through ill-will or ignorance, refuses to do so. In such an extreme case the Commissioners would avail themselves of the authority of this section. It is rare that the provision in regard to taking land comes into play; but occasionally, where a "trench" fishway is used, it passes through land not belonging to the dam-owner. The amount of land to be taken at such times would not exceed that required for an ordinary foot-path.

with costs and interest at the rate of twelve per cent.: *provided*, that when a fishway has been constructed in accordance with the provisions of this section, said commissioners shall not require the alteration of the same by the owner of the dam within five years from the completion of the same.

SECT. 5. Said commissioners may take, or cause to be taken, any fish, at any time or manner for purposes connected with fish culture, or with scientific observation.

SECT. 6. Each of said commissioners may, in the discharge of his duties, enter upon and pass through or over private property without rendering himself liable in an action for trespass.

SECT. 7.* The riparian proprietors of any pond, the superficial area of which is not more than twenty acres, and the proprietors of any pond or parts of a pond, created by artificial flowage, shall have exclusive control of the fisheries therein existing, but this shall not abridge any rights heretofore granted, to fish for herring or alewives in ponds of the above dimensions which are connected with salt water, nor affect any previous laws restricting fishing for any period of time.

SECT. 8. The fishery of any pond, the superficial area of which is more than twenty acres, shall be public, except such as may have been specially granted by law or leased as hereinafter provided, and all persons shall, for the purpose of fishing, be allowed reasonable means of access to the same, without rendering themselves liable to prosecution or action for trespass.

SECT. 9. The commissioners, or any two of them, may, in the name of the Commonwealth, lease any great pond, exceeding twenty acres in area, for the purpose of cultivating useful fishes, for such periods of time and on such terms and conditions as shall seem to said commissioners most for the public good; and the lessee of such pond may occupy a portion, not exceeding one-tenth part thereof, with inclosures and appliances for the cultivation of useful fishes; but this shall not affect any public rights in such pond, other than the right of fisheries; and the appliances and enclosures used by the lessee shall be so placed as not to debar ingress to or egress from such pond at proper places.

* SECT. 7 gives control of fisheries to riparian owners of ponds of not over twenty acres, except the herring fisheries already established.

Our Ancient Charters (chap. 63, p. 148,) make all ponds *public* that exceed ten acres; but it seems advisable to increase this limit to twenty acres, because a twenty-acre pond is really a small affair, and such as hundreds of our farmers have within the limits of their land, and, practically, such small ponds have come to be looked upon as private; nor would well-disposed people be usually disposed to cross private lands for the purpose of fishing therein.

SECT. 10. The commissioners shall have the custody of all leases made under the provisions of this act, and may cause any agreements, rights, reservations, forfeitures and conditions therein contained to be enforced, and for that purpose may institute proceedings in the name of the Commonwealth, and may take possession of any premises, for conditions in such lease thereof being broken, and revesting the Commonwealth therewith may again lease the same.

SECT. 11. The county commissioners for each county shall, upon the request and at the expense of any party claiming to be interested in any great pond, cause the same to be measured, and such measurement when determined shall be recorded in the town clerk's office of each town within which said pond is situated; and said measurement shall take place in the month of July, and no arm or branch shall be computed as a part of any pond, unless said arm or branch be at least fifty feet in width and one foot in depth.

SECT. 12. The riparian proprietors of any pond of less area than twenty acres, shall have all the privileges given them by section seven as soon as the said county commissioners have determined that their ponds do not exceed the above limit.

SECT. 13. Any pond within the limit of twenty acres in area, bounded in part by land belonging to a town or county of the Commonwealth, shall only become the exclusive property of the individual proprietors as to the fisheries therein, upon payment to the town treasurer, county commissioners or state treasurer, of a just compensation for their respective rights therein, to be determined by a board of three persons, one of whom shall be one of the riparian proprietors of said pond, one the chairman of the board of selectmen, if the rights of a town are in question, or of the county commissioners, if the rights of a county or the Commonwealth are in question, and one to be appointed by the commissioners on inland fisheries.

SECT. 14.* For the purposes of this act no tidal stream shall be considered navigable above the point where, on the average throughout the year it has a channel less than forty feet wide and four feet deep during the three hours nearest the hour of high tide.

SECT. 15. The governor, with the advice and consent of the council, upon the recommendation of the commissioners on inland

* SECT. 14 defines a navigable tidal stream.

The terms "river" and "navigable" have in law a meaning very uncertain, if, indeed, they have a meaning at all. In this definition of "navigable," the dimensions of an average *canal* have been used.

fisheries, may limit or prohibit, for a period not exceeding five years at a time, fishing in the navigable tidal waters of specified streams, and in the unnavigable waters of streams, except in such portions as may be inclosed, according to the provisions of section sixteen; and whoever fishes in streams whose fishery is thus limited or prohibited, shall forfeit for the first offence ten dollars, and for every subsequent offence fifty dollars, and shall in addition forfeit all fish captured and apparatus used.

SECT. 16. Any riparian proprietor may, within the limits of his own premises, inclose the waters of a stream not navigable, for the cultivation of useful fishes: *provided*, he furnishes a suitable passage for migratory fishes naturally frequenting such waters.

SECT. 17. The governor, by and with the advice and consent of the council, may, for the purposes of this act, arbitrarily fix and define the tidal bounds and mouths of streams upon recommendation of the commissioners on inland fisheries.

SECT. 18.* Fishes artificially propagated or maintained shall be the absolute property of the person propagating or maintaining them.

SECT. 19.† Whoever fishes in that portion of a pond, stream or other water in which fishes are lawfully artificially cultivated or maintained, without the permission of the proprietors, shall forfeit not less than one dollar nor more than twenty dollars for the first offence, and not less than five nor more than fifty dollars for any subsequent offence.

SECT. 20. Any person legally engaged in the artificial culture and maintenance of fishes, may take them in his own waters how and when he pleases, and may have them in his possession for purposes properly connected with said culture and maintenance, and may at all times sell them for these purposes, but shall not sell them for food at seasons when their capture is prohibited by law.

SECT. 21.‡ Whoever, between the fifteenth of April and the fifteenth of December, in each year after this year, uses any sweep-

* SECT. 18 orders that cultivated fishes shall be the property absolute of the owner.

This power of *property* lies at the root of all fish-culture; without it, all laws are useless.

† "Artificially cultivating or maintaining fishes" is any act for their increase or preservation—such as putting up notices forbidding fishing, or feeding fishes, or introducing new ones, &c.

‡ SECT. 21 orders that no small-mesh net shall be used in our *larger* rivers during certain seasons.

It is absolutely necessary that our larger rivers should be reserved for the great fishes like salmon and shad. This only can be done by keeping out small-meshed nets, during the proper season. The capture of the smaller species, such as alewives, should be confined to the tributary streams, where they can be much better taken.

seine or hand or dip-net in the waters of the Connecticut, Westfield, Deerfield, Miller's, Merrimack, Nashua or Housatonic Rivers, or their tributaries, having a mesh which stretches less than five inches when new and dry, shall forfeit, for the first offence, twenty-five dollars, and for every subsequent offence, fifty dollars; and in each case shall also forfeit the apparatus thus unlawfully used, and the fish captured.

SECT. 22. Whoever uses any sweep-seine or combination of sweep-seines in such a manner as at any moment to close or seriously obstruct more than two-thirds of the width of the stream at the place where it is used; and whoever delays or stops in paying out or hauling any sweep-seine, or hauls any sweep-seine within one-half mile of a point where such seine has been hauled within an hour, shall be liable to the same penalties and forfeiture set forth in the preceding section: *provided*, that this section shall not apply to seines used in the smelt fishery; and *provided, further*, that none of the provisions of this section shall affect the fisheries for shad or alewives in Taunton Great River.

SECT. 23. Whoever at any time obstructs with a salmon-pot more than one-half of a waterfall, channel or rapid, or sets, uses or maintains in any of the waters of this state a salmon-pot, the diameter of which is more than two feet, or who, when the taking of salmon is forbidden by law, sets, uses or maintains in any of such waters, any salmon-pot whatever, shall forfeit said salmon-pot and all fish captured, and shall pay ten dollars for the first offence, and twenty for every subsequent offence.

SECT. 24. Whoever takes salmon, shad or alewives in any of the waters of this Commonwealth, except the Connecticut, Taunton Great, Nemasket and Merrimack Rivers, or their tributaries, in any other manner than by naturally or artificially baited hook and hand-line, on any day of the week but Monday, Wednesday, Friday and Saturday, shall forfeit for each offence the penalties prescribed for taking these species of fish at seasons prohibited by law.

SECT. 25.* Every clerk, superintendent or other officer having charge of a market, provision store or other place where fish are

* SECT. 25 makes it the duty of all officers of markets to report to a magistrate when any fish are illegally offered for sale.

It is the fault of most of our laws that the *sellers* and *buyers* are not reached; therefore, if the person who takes the game be not arrested in the act, there is no conviction. The English and Canadians understand this better, and they include sellers, buyers and possessors in the number of persons liable. Our marketmen are usually well disposed to carry out such laws, the effect of which is to increase the quantity and improve the quality of their stock; but they have no incitement to obey, and every temptation to disobey.

sold, shall immediately inform a constable or a trial justice in the town or city where said premises are situated, when any fish which has been taken in violation of law, has been offered for sale on said premises: *provided*, that such clerk, superintendent or other officer shall know or have reasonable cause to believe that said fish has been so taken; and for each neglect so to do, such clerk, superintendent or other officer shall pay a fine of not less than five dollars nor more than fifty.

SECT. 26.* Whoever takes or catches fishes which at any season frequent fresh water, except eels and pickerel, in any other manner than by artificially or naturally baited hook and hand-line, hand or dip-net, sweep-seine or salmon-pot, shall forfeit a sum not less than five dollars nor more than fifty dollars: *provided*, that nothing herein contained shall authorize the taking or catching of trout, land-locked salmon or lake trout, in any other manner than by hook and hand-line; and *provided*, that towns may be allowed to permit the use of set nets for the capture of herring or alewives.

SECT. 27. Whoever takes or catches any salmon within the limits of this Commonwealth, or who buys, sells or has in possession the same taken within said limits between the first day of August and the first day of May, shall forfeit for each offence not less than ten, nor more than fifty dollars; and whoever buys, sells or has in possession any young salmon less than one foot in length shall forfeit five dollars for every young salmon of said dimensions bought, sold or had in possession.

SECT. 28. Whoever takes or catches any trout, land-locked salmon or lake trout, within the limits of this Commonwealth, or buys, sells or has in possession the same taken within said limits between the twentieth day of September and the twentieth day of March in each year, or takes or catches any trout, land-locked salmon or lake trout with any net or salmon-pot, at any season of the year, shall forfeit for each offence a sum not less than one nor more than twenty dollars.

SECT. 29. Whoever catches any shad at any other season than between the first day of March and the fifteenth day of June, shall forfeit for each shad five dollars.

† SECT. 26. It forbids fishing in inland waters except with such tackle as is allowable by the nature of this fishing.

This section is made necessary by the outrageous inventions now used by poachers in our ponds and brooks, to exterminate the few fish left. Traps, trawl-lines, and every other engine are called into play, and render the operation of re-stocking futile. It should be observed that the term "*hand-line*" in this Act refers to every line (whether with a pole or not) that is controlled by the hand of the fisherman, in *distinction* from *set-lines* that are left more or less to themselves.

SECT. 30. Whoever takes or catches any black bass in any of the ponds or streams of this Commonwealth from the first day of December to the first day of June in each year, or at any time except with naturally or artificially baited hook and hand-line, or buys, sells or has in possession any such fish taken within the limits of this Commonwealth, shall forfeit for each offence not less than two nor more than twenty dollars.

SECT. 31. Whoever takes or catches any smelts or white perch, in any of the waters of this Commonwealth, in any other manner than by naturally or artificially baited hooks and hand-lines, between the fifteenth day of March and the first day of June, in each year, or takes or catches any smelts with a net of any kind, on any known spawning ground within said Commonwealth, shall forfeit for each smelt so taken or caught, the sum of twenty-five cents: *provided*, that nothing herein contained shall apply to any person catching smelts in any seine or net in Taunton Great River, or in Dukes County while fishing for herring or alewives, or to the lessees of the towns of Yarmouth and Dennis while fishing for perch or alewives in Bass River or its tributaries, or to any person lawfully fishing for perch, herring or alewives in either branch of Westport River.

SECT. 32. Actions and prosecutions under the laws relating to inland fisheries shall not be commenced except within four months from the time when the cause of action accrues or the offence is committed.

SECT. 33. One-half of the money recovered as a penalty in any case arising under the laws relating to inland fisheries, shall be paid to the person making the complaint in the case in which the same is recovered, and the remainder to the Commonwealth.

SECT. 34. The two hundred and forty-ninth chapter of the acts of the year eighteen hundred and sixty-six, and the one hundred and seventy-ninth chapter of the acts of the year eighteen hundred and sixty-eight, and all legislation heretofore enacted limiting the time and season when pickerel may be taken are hereby repealed. [*Approved June 12, 1869.*]

CRIMINAL PROCEDURE UNDER THE ACT FOR ENCOURAGING THE CULTIVATION OF USEFUL FISHES.

Having learned the name of the party who has committed the offence under the statute, the prosecutor must then proceed to procure his arrest. For this a warrant is necessary. It may be granted by any judge of a police, or municipal court, by a trial justice, or by any justice of the peace, of the county wherein the offence has been

committed. If, however, the offence be committed within one hundred rods of the boundary line between two counties it may be taken cognizance of in either of them; and an offence committed upon the sea, within one league of the shore, may be prosecuted and punished in the adjacent county. The warrants, issued by justices of the peace, not trial justices, must be made returnable before some trial justice, or police court; justices of the peace receive no fee for issuing warrants in criminal cases.

The prosecutor or some one in his behalf, must be prepared to swear to the truth of the charge which will be reduced to writing by the magistrate, if he deems it right to take action in the case, according to the forms which follow these remarks, and will be sworn to before him, and then prefixed to his warrant, which is delivered to a constable or police officer to be executed.

It is then the duty of such officer to arrest the defendant; when, if he demand to be released on bail until the time specified for his trial in the warrant, bondsmen will be required who must be, in the opinion of the magistrate, pecuniarily responsible for the amount of the penalty and all costs of trial, service, etc. The defendant can then be released until the time specified for his trial, at which time, if he does not appear, his bail will be forfeited, and the bondsmen must pay. If, however the bondsmen see fit to surrender the defendant, they can do so at any time and be relieved from all responsibility.

On the appearance of the defendant before the court he will be put upon his trial or examination. Trial justices and police courts have jurisdiction in the first instance of all offences of which the fine is not above fifty dollars, and the imprisonment not more than six months in the house of correction, or jail, or both of said penalties. Most of the offences under the fishery acts, consequently, are within the original jurisdiction of the lower courts.

In these courts the Commonwealth is represented by no counsel as it is by the district-attorneys in the superior court. On this account the trial justice is compelled to act both as a judge and prosecuting officer, unless, as is now very frequently the case, the private prosecutor employs counsel. It would certainly be advisable in important cases to employ counsel, for otherwise flagrant offenders may escape conviction. This is the more necessary from the fact that the Commonwealth has no right of appeal in any criminal case, while it is always enjoyed by the defendant.

The defendant can demand a jury of twelve men in the superior court and waive examination in the lower court, if he so elects. If, on conviction, a fine is imposed, the defendant may be committed

until it is paid. Some forms of complaint drawn under the different sections of the Act are annexed, which may be found convenient in inland fishery cases.

As the offences to be dealt with under the act are entirely statute offences, fishes being *feræ naturæ* at the English common law, and everybody having an equal right to take them with proprietors of water, provided he could fish without trespassing, all complaints and indictments must follow literally the words of the statute.

In the forms which follow, the words "force and arms" are inserted in every case though a special statute has declared that they are not essential, unless their omission prejudices the defendant's case. It is, however, safer to insert them.

Form of Complaint under Section Fifteen.

To A. B., Esquire, a Trial Justice within and for the county of Middlesex :
C. D., of Waltham, in said county, on behalf of the Commonwealth of Massachusetts, on oath complains, that E. F., of said Waltham, on the first day of June, in the year of our Lord eighteen hundred and seventy, at said Waltham, in said county, did fish in the navigable, tidal waters of Charles River, so called, (or in the unnavigable waters of a certain stream, to wit, Charles River in such portions of the same as were not at the time enclosed by riparian proprietors for the culture and maintenance of useful fishes,) and in certain portions of the same in which all fishing had been prohibited for the period of four years from the first day of September, in the year of our Lord eighteen hundred and sixty-nine, by the governor of the said Commonwealth, with the advice and consent of the Executive Council of the said Commonwealth, and upon the recommendation of the commissioners on inland fisheries of the said Commonwealth, against the peace, etc., etc., and the form of the statute, etc., etc.

Form of Complaint (or Indictment) under Section Nineteen.

To A. B., Esquire, a Trial Justice in and for the county of Middlesex :
C. D., of Waltham, in said county, on behalf of the Commonwealth of Massachusetts, on oath complains, That E. F., of said Waltham, on the first day of June, in the year of our Lord eighteen hundred and seventy, at said Waltham, in said county of Middlesex, with force and arms, did fish in that portion of a certain stream, (pond, or other water,) in which fishes are lawfully cultivated and maintained artificially by said C. D., and without the permission of said C. D., proprietor of said fishes, against the peace of said Commonwealth, and the form of the statute in such cases made and provided.

Complaint, etc., under Section Twenty-one.

To A. B. Esquire, etc., etc.:

on oath complains, That E. F., of said Waltham, in said county of Middlesex, on the first day of June, in the year of our Lord eighteen hundred and seventy, with force and arms, at said Waltham in said county,

said day being between the fifteenth day of April and the fifteenth day of December, did use a sweep seine (hand, or dip net) in the waters of a tributary of the River, the meshes of which seine stretched less than five inches when new and dry, against the the peace of this Commonwealth, etc., etc.

Complaint, Section Twenty-two.

To A. B., Esquire, etc., etc. :

That E. F., of etc., etc., on the first day of June, in the year of our Lord eighteen hundred and seventy, with force and arms, at said Waltham, did use a sweep seine, (or combination, etc.) in such a manner as for several moments to cause or seriously obstruct more than two-thirds the width of the stream at the place where said sweep seine was used, and at the time aforesaid was using said sweep seine for a purpose other than the smelt fishery, (or if in Taunton Great River, for a purpose other than the shad or alewife fishery,) against the peace, etc., etc.

Or, that E. F. etc. etc., did delay or stop in hauling a certain sweep seine. (Conclude as above.)

Complaint under section twenty-three. Form regular, much as in preceding section.

Section Twenty-four.

on oath complains that E. F., etc., etc., on the first day of in the year of our Lord eighteen hundred and seventy, said day being neither Monday nor etc., at said etc., with force and arms, in certain of the waters of this Commonwealth, other than the Connecticut, Taunton Great, and Merrimack and Nemasket Rivers, and their tributaries, to wit, in the, etc., etc., and in a manner other than with a naturally or artificially baited hook and line, to wit, with a certain spear, did take certain salmon, (shad, or alewives,) to wit certain, etc., against the peace, etc., etc., and the form of the statute, etc.

Section Twenty-five.

on oath complains that E. F., etc., etc., on the first day of June, in the year of our Lord eighteen hundred and seventy, at Boston, in the county of Suffolk, with force and arms, being a clerk, (superintendent, or other officer,) having charge of a certain market (place, etc.), where fish are sold, well knowing, (or having reasonable cause to believe) that certain fish offered for sale in said market, had been taken in violation of law, to wit, certain salmon there offered for sale, did maliciously neglect to inform a constable of said Boston of the fact that said salmon had been illegally captured and were exposed for sale as aforesaid, against the peace, etc., and the form of the statute, etc.

Section Twenty-six.

on oath complains that E. F., of Marshpee, in the county of Barnstable, on the day, etc., etc., at said Marshpee, in said

county, with force and arms, did take and catch, in a manner other than with an artificially or naturally baited hook and hand line, hand or dip net, sweep seine, or salmon-pot, to wit, with a spear, divers fish at certain seasons frequenting fresh water, to wit, five trout, against the peace, etc., etc., and the form of the statute, etc., etc.

Or did buy (sell, or have in possession) certain young salmon, less than one foot in length, to wit: five salmon of less than one foot in length.

Section Twenty-seven.

on oath complains that E. F., etc., etc., with force and arms, at Marshpee, in the county of Barnstable, the same being within the limits of the said Commonwealth, between the first day of August, and the first day of May, to wit, on the first day of September, in the year of our Lord eighteen hundred and seventy, did take, (catch, buy, sell, etc.,) five salmon, against the peace of this Commonwealth, and the form of the statute, etc., etc., etc.,

Sections twenty-eight and twenty-nine, and section thirty Forms like preceding.

Section thirty-one. Form like preceding, and like that of section twenty-six.

PETITION FOR LIBEL OF TACKLE, ETC., FORFEITED UNDER
FISHERY ACT.

COMMONWEALTH OF MASSACHUSETTS.

*To the Honorable the Justices of the Superior Court next to be holden at Dedham
within and for the County of Norfolk :*

Respectfully represents, A. B., of Cohasset, in said county of Norfolk, constable of said Cohasset, that on the first day of June, in the year of our Lord, eighteen hundred and seventy, he seized a certain salmon-pot, the diameter of which is more than two feet, and the value of which is more than \$20, in the waters of a certain stream situate in said county of Norfolk, and known as Salt River, where the same was at that time unlawfully used by one C. D., of said Cohasset, as your petitioner is informed and believes, and being the property of said C. D., as your petitioner is further informed and believes, and now, therefore, your petitioner prays that a decree of forfeiture of said salmon-pot may issue out of this honorable court, according to the twenty-third section of the three hundred and eighty-fourth chapter of the acts of the year eighteen hundred and sixty-nine, entitled "An Act for encouraging the Cultivation of Useful Fishes."

And your petitioner will ever pray.

(Signed) A. B.

N. B. If the libel is brought in the superior court, according to the above form, the value of the goods libelled must be more than twenty dollars according to the appraisement provided for in sections 18, 19, and 20 of chapter 153 of the General Statutes. The

report of such appraisement should be filed with the papers in the case. If the goods are appraised under twenty dollars, the libel must be brought before a justice of the peace, or in a municipal, or police court. Upon filing the libel, the constable, or other party, must by statute, advertise twice in some newspaper printed in the county, the later advertisement being at least fourteen days before the hearing on the libel, that the offender must show cause why the tackle, etc., should not be forfeited according to the decree of the court. The form should be something like the following:—

To C. D., of Cohasset, in the county of Norfolk, and to any and all other persons interested in certain fishing tackle, to wit, one salmon-pot, seized by me this day in the waters of Salt River, in said Cohasset, where the same was unlawfully used by said C. D., the value of which, in the opinion of a certain appraiser appointed by the court, exceeds twenty dollars.

You are hereby required to appear before the justices of our Superior Court, next to be holden at Dedham, within and for our said county of Norfolk, on the second Tuesday of September next, to answer to the complaint against said salmon-pot, and for trial and to show cause, if any you have, why a decree of forfeiture should not be entered in said Court against said salmon-pot, the same having been used by said C. D. in violation of the laws of this Commonwealth.

(Signed) A. B.

[Chap. 64.]

AN ACT concerning Fisheries in Bass River in the County of Barnstable.

Be it enacted, &c., as follows:

SECT. 1. The provisions of chapter one hundred and seventy-nine of the acts of the year eighteen hundred and sixty-eight, shall not apply to the lessees of the the towns of Yarmouth and Dennis, while fishing for perch or alewives in Bass River or its tributaries.

SECT. 2. This act shall take effect upon its passage. [*Approved March 10 1869.*]

[Chap. 76.]

AN ACT to extend the provisions of the Act of the year eighteen hundred and sixty-eight to regulate fishing in Connecticut River.

Be it enacted, &c., as follows:

SECT. 1. Any person who shall take, or aid or assist in taking, from the Connecticut River, any shad at any other time than between the fifteenth day of March and the fifteenth day of June in each year, shall forfeit and pay for each offence the sum of one hundred dollars; and any person who shall take, or aid or assist in taking, from the Connecticut River, any salmon before the fifteenth day of March, in the year one thousand eight hundred and seventy-two, shall forfeit and pay for each offence the sum of fifty dollars.

SECT. 2. Nothing in this act contained shall apply to the taking of any fish by order of the fish commissioners, for the purpose of the natural or artificial propagation of the same.

SECT. 3. No person shall set or draw, or shall assist or aid in setting or drawing, any net or seine for the purpose of taking fish in Connecticut River, at any time between the setting of the sun on Saturday evening of each week and the rising of the sun on the succeeding Monday morning; and the owners of all weirs, pounds and set-nets of any description, placed in the waters of said river, shall cause the same to be and remain open and free for the passage of fish during the said period in each week, in such manner as to satisfy the fish commissioners. And every person who shall violate the provisions of this section, and every person owning or controlling, in whole or in part, any pound or weir, and failing to comply with the requirements of this section, shall forfeit and pay the sum of four hundred dollars to the treasurer of the state for each offence; and any person setting or using, or aiding or assisting in setting or using, any pound, weir, or set-net in said river, between the fifteenth day of March and the fifteenth day of June in each year, the meshes whereof are less than five inches in extent, shall also forfeit and pay the sum of four hundred dollars for each offence, and such pounds, weirs and set-nets shall be forfeited to the Commonwealth.

SECT. 4. The mayor and aldermen of any city and the selectmen of any town bordering on the Connecticut River, shall appoint and fix the compensation of one or more suitable persons as fish wardens within their respective cities and towns, who shall make complaint of all offences under this act.

SECT. 5. Chapter one hundred and thirty of the acts of the year eighteen hundred and sixty-eight is hereby repealed. [*Approved March 17, 1869.*]

[Chap. 172.]

AN ACT to regulate the Oyster Fisheries and the Seining of Fish in Cole's River and Lee's River in Swansea.

SECT. 9. No person shall set, draw or use any seine, net or weir for taking fish, except menhaden, in Cole's River, within the limits of the town of Swansea, nor in Lee's River, within the limits of the towns of Swansea and Somerset. Whoever violates the provisions of this section shall pay a fine of not less than fifteen dollars nor more than fifty dollars.

SECT. 10. This act shall take effect upon its passage. [*Approved April 17, 1869.*]

[Chap. 235.]

AN ACT for the protection of Trout in Avery Brook, in the towns of Charlemont and Heath.
Be it enacted, &c., as follows:

SECT. 1. Whoever, without a written license from the owners or lessees of Avery Brook or its tributaries, takes any trout therefrom, within the limits of either of the towns of Charlemont or Heath, shall forfeit and pay a fine of twenty-five dollars for every such offence, to be recovered before any trial justice, or in any court of record in the county of Franklin.

SECT. 2. The foregoing section shall be without effect unless the owners or lessees aforesaid shall erect and maintain notices of this act and its penalties, painted or engraved in clear, legible letters; said notices to be erected within one hundred rods of each other throughout the entire length of said brook and its tributaries, and on or near the banks thereof, within the boundaries of the aforesaid towns.

SECT. 3. Whoever destroys, injures or defaces any such notices so erected, shall forfeit and pay for every such offence a fine of twenty-five dollars, to be recovered in the same manner as provided in section one in this act. [*Approved May 6, 1869.*]

[Chap. 422.]

AN ACT in addition to an Act concerning the Obstructions to the Passage of Fish in Connecticut and Merrimack Rivers.

Be it enacted, &c., as follows:

SECT. 1. Whenever any proprietor of any dam in Massachusetts, upon the Merrimack or Connecticut Rivers, shall have refused or neglected for the period of thirty days from the time when the commissioners of fisheries shall have furnished such proprietors with the plan specified in sections three, four and five of chapter two hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six, to agree with said commissioners for the building on, over or around his dam of the fishway prescribed by the plan furnished such proprietors by said commissioners, then said commissioners, or the survivors or survivor of them, or their successors or successor, may file in the supreme judicial court a bill in equity, in their name but in behalf of said Commonwealth, asking for a decree to enforce the immediate construction and erection of such fishway as is called for by the plan so furnished, to the acceptance of said commissioners, and for such further and other relief as they may deem necessary to enable them to enforce the provisions of said chapter two hundred and thirty-eight.

SECT. 2. Such proceeding, whether by bill to enforce specific

performance or by suit at law, as is provided in section seven of said chapter two hundred and thirty-eight, for money expended, shall be brought in the supreme judicial court; may be made returnable in the county of Suffolk, and shall have precedence upon the docket and priority in all its stages over suits depending between private parties. [*Approved June 21, 1869.*]

Attention is called to the following important Act of the Connecticut Assembly, abolishing pounds after 1871:—

AN ACT relating to Fisheries.

Be it enacted by the Senate and House of Representatives, in General Assembly convened:

SECT. 1. That from and after the end of the year 1868 it shall be unlawful for any person to erect or construct in the waters along the northerly shores of Long Island Sound in this state, any weir or pound for taking shad or white-fish, within seventy rods of the place where any other weir or pound belonging to other persons has been erected, used and continued during the fishing seasons for a period of ten years or more last past: *provided*, that the prohibition of this act shall not extend to or affect any persons, company or association, their successors or assigns, who may have had, used and continued during the seasons for fishing for a period of not less than five years at any time during the last ten years, such pounds or weirs within a nearer distance from such older established and located pounds and weirs, and every person attempting or intending to violate the provisions of this act shall be liable to be restrained by injunction, and also to pay to the person or persons so injured all the damage which they shall have sustained, in a proper action instituted for that purpose, which may be brought and maintained in the county in which either or any of the parties may reside.

SECT. 2. That from and after the end of the year 1871 it shall be unlawful for any person to erect, construct or continue in the waters along the northerly shore of Long Island Sound in this state, any weir or pound for taking of fish.

SECT. 3. All acts and parts of acts inconsistent herewith are hereby repealed. [*Approved July 31, 1868.*]

[D .]

ON THE LIMITS OF ARTIFICIAL CULTURE, AND THE POSSIBLE EXHAUSTION OF SEA FISHERIES.

Although sea fisheries do not come within the field of this report, their relation to those inland is such as to demand a moment's consideration. Since artificial fish-culture has come up in Europe, and has been supported by the French government, by the Société d'acclimatisation, and by men like Coste, Lacoin and Vidal, it has gained a certain power and influence, especially in France, where attempts have been made to cultivate not only fresh water fishes, but also oysters, craw-fish, lobsters, and certain of the brackish water fishes, such as the *Bar* (*Labrax lupus*), which corresponds somewhat to our striped bass. In this pursuit the cultivators have laid hands on certain tidal flats hitherto looked on as common property by the fishermen. Such conduct has of course provoked opposition, and various writers have come out against the system. Notable among them is J. B. A. Rimbaud, formerly secretary of the *prud'hommes pêcheurs** of Marseilles. With the true provençal fire, this champion draws his sword against all monopolies of the coast-line, and against M. Coste's pet experiments, under the name of "Unnatural water-culture."† Rimbaud is a formidable opponent; although not a zoölogist, he is a fisherman, and knows a fish perfectly well when he sees it. Moreover, he knows the literature of his subject, and its history. "What does your pisciculture amount to? (he asks in substance.) Compared with the sea, your pools and brooks produce nothing. You do not raise enough fish in all France to feed a town, and every fish you raise costs more than it will bring. You yourselves acknowledge that pisciculture has generally failed, but you make excuses for the failure which are not excuses. The real cause is in the impracticability of the thing. And yet you come with your great pretensions

* The *prud'hommes pêcheurs* or Fishery Selectmen are a board of judges chosen by the fishermen themselves, and have power to settle all cases within certain limits. They hold court usually every Sunday, and sit in their common sailor clothes. No advocates are allowed. Each party states his case, and the selectmen then render judgment. If the decision be against the defendant, the chief rises and says to him, "*La lei vou coundano.*" (The law condemns you.) The accused pays the fine, and the whole affair is settled. The costs of the court are *two cents each* for plaintiff and defendant, which go into St. Peter's box to pay for the support of a lighthouse. This ancient usage dates back beyond the middle ages. Is our system of minor courts an improvement?

† *L'Industrie des Eaux Saleés*, 1869.

and seize inlets and estuaries to make oyster parks and mullet ponds. What is the consequence? your oysters and mullets, overfed, cease to breed, and you constantly decrease instead of increasing the supply. The method itself is unnatural, and a little thing will destroy your whole crop. You talk of the Roman fish-ponds. They were the contrivances of monopolist gluttons, when Rome was rotten with luxury; no poor man ever was helped by them! No! These are pretty playthings for M. M. Coste and Lacoïn, with their little troughs and pans; but as to being producers of food, it is nonsense!" Now there is a great deal of truth in all this. France is a country ill adapted to fresh water pisciculture. The streams, especially in the south, are torrential in their character, very turbid and full in the wet season, and reduced comparatively to a pebble bed in the dry months; such are the Rhone, the Loire, the Garonne and others. Then there is a striking want of large lakes, and of abundant cold springs. The absence, too, of great and old forests about the water-courses is a serious difficulty. Finally, the French are not a "sporting" people, like the English and Americans, who are often almost monomaniacs about fish and game. Therefore it is that their attempts with salmon and white fish have had small success. Their system of oyster culture, too, has brought unexpected troubles to light. These oysters, placed in very shallow pools or beds of brackish water, were carefully fed and tended by persons who walked about on the little dams that separated the nurseries. Thus nourished, they waxed fat, and the profits were at first large. But it would seem that these gross molluscs produced no "spat," so that the owners were obliged constantly to rake new seed from the ocean beds, and thus they preyed on the original stock without returning any increase. During the present year, however, came their great calamity. There was some very hot weather; the shallow water of the beds rose to a high temperature, and at the celebrated Ile de Ré and other places, whole crops of oysters were killed. In a northern climate the same destruction would regularly occur from frost.

The plan of confining mullets and sea-bass in coves or estuaries seems hardly likely to pay the cost. If they are fed, the food comes to more than the mullet; if they are not fed, it is more profitable to take them in the common way from the ocean. But pisciculture in the *wrong* way and place, is not pisciculture in the *right* way and place. In a country like our own, full of good ponds and trout streams, these waters once restocked will take care of themselves, and will continue prolific, if they are not overfished. Therefore it is that laws are passed giving owners the power to

protect such waters, or, in other words, to prevent overfishing. As to oysters, the method pursued on Cape Cod is doubtless much better than the European. In suitable places, where there are shallows protected from heavy waves, and where some stream gives a certain admixture of fresh water, the seed oysters are planted. These are got from the heads of the bays where the water is so fresh that they never attain much size or flavor. Thus planted they grow rapidly and spawn freely, making a permanent bed. Like all other things, they are, nevertheless, uncertain. Sometimes a gale covers them with mud or gravel; sometimes the beds are invaded by the whelk (*Pyrula*) and other boring molluscs, who play the part of the lawyer with the two litigants in La Fontaine's fable. Nor are misfortunes wanting that are wholly unlooked for. Thus, during the last season, in June, the New York oystermen, confidently raking for their harvest, brought up to their horror only bushel upon bushel of ground shells! The depredators were an army of drum-fish (*Pogonias*) advancing from the south. They systematically moved over the plantations, grinding up the natives with their strong throat-plates.

As to the confining of sea fishes to be fattened for market we do not attempt it, nor would it be profitable unless the product of the sea were nearly a failure; and this brings us to the important question on the *possible exhaustion of sea fisheries*.

In a former report (for 1867, p. 8,) a reference was made to a notable report of the English Commissioners,* whose conclusions are expressed in the following emphatic words: "Notwithstanding the most careful inquiries specially directed to the point, we have been unable to meet with any case in which we were satisfied that sweep-net fishing, fishing with small meshed nets, or weirs, in bays or estuaries, has been permanently injurious to the supply of fish; while on the other hand, it is proved that, in certain bays and estuaries, such fishing has gone on for very many years without permanent injury to their fisheries" (vol. 1, p. 106.) That is to say, no matter how or when you fish in salt water, the harvest will be just as good. Against these commissioners and their conclusions M. Rimbaud rises in wrath, and is seconded by Sabin Berthelot,† an old naval officer, an experienced fisherman, and one of the authors of the Natural History of the Canaries. Two such competent critics seldom approach a subject. Their only weak point is, that their familiarity lies rather with the fishes of the Mediterranean and the warm

* Report of the Commissioners appointed to inquire into the Sea Fisheries of the United Kingdom, 1865, 2 vols., about 1,600 pages.

† Études sur les pêches maritimes 1868.

Atlantic than with those of the Irish Sea and German Ocean. With their criticisms, the report of the English Commissioners, and such arguments as may be added, we may hope to get some view of the difficulties of the subject, if not of the subject itself. How, in the first place, were their conclusions come at; on what evidence do they rest? It would appear that the Commissioners went to various sea-ports, called the fishermen about them, and took their evidence. They thus visited nearly ninety places, and asked about 62,000 questions, all of which, with the answers, are duly printed. This enormous oral investigation is the heart of the whole affair. But, objects Rimbaud, this is no way to investigate a subject! Would you, Professor Huxley, study the actinoid polyps by running about and asking Milne Edwards and Dana what they thought about them? Would you not take your microscope to the seaside and look with your own eyes? This want of personal observation is seen at each turn. Thus (p. 20,) when considering whether the beam-trawl does or does not destroy spawn and mangle the fish, they enter into long arguments based on evidence, and on the specific gravity and structure of the beam-trawl, to show that there was no such damage. Could one of them have said, "I *saw* this done," it would have been of real value.* And now, what is the nature of the testimony brought out by these 62,000 questions? Let the report answer (p. 17.) "As these complaints have usually been brought by one class of fishermen against others, who rightly or wrongly conceived themselves to be unjustly injured in their most important interests; and, as they have been rebutted by persons whose means of living largely, or wholly, depend on their power to continue the alleged wrongful practices, it will not be a matter of astonishment that the evidence, so far as it records merely personal convictions, and assertions that can be neither proved nor disproved, is of the most conflicting character. But fishermen, as a class, are exceedingly unobservant of anything about fish which is not absolutely forced upon them by their daily avocations," &c., &c. That is to say, this report is chiefly based on oral evidence; most of such evidence is by fishermen; and, fishermen as a class, are not only grossly ignorant, but have every temptation to pervert the truth, and to fall into stupid mistakes! Such is the method of investigation; and, what is the exact matter to be investigated? It is the

* To show how these gentlemen allowed themselves to be deceived by witnesses whom they knew had temptation to prevaricate, they state (p. 19,) that were it not for the *trawl* there *would be no turbot or soles!* As a fact, in many places these fishes are exclusively taken with *hook and line*. See Dictionnaire générale des pêches, art. Sole and Turbot; also see Report of the Commission, question 5,683.

following question: Can (1) the same number of men, (2) in the same time, (3) on the same ground, (4) with the same gear, catch (5) the same number of fish, *now* as they could *formerly*? Here is a proposition with five variables, and the wrong solution of any one will greatly affect, and may wholly destroy the proposition.

(1.) *The number of men.* In Great Britain they have a tolerable idea of the number of men employed in the fisheries; and, in France, owing to the marine inscription, the knowledge is very accurate. (2.) *The time occupied.* Of course, a large average must be taken to arrive at this variable. Thus, could it be proved that, for a long series of years, herring boats had got their full fares in half a night, while, during another series of years, it had required the whole night, the deduction would be that the fishery had failed. Here is a point about which good testimony is next to impossible. (3.) *On the same ground.* There is a good chance for reliable information in this matter, because certain coasts or banks have been fished for many generations. (4.) *With the same gear.* This variable is variable indeed. Who can tell, for a whole country, the exact changes, during some generations, in the number and tonnage of the craft, the depth, length, mesh, number and kind of the nets, or the manner of setting them; the number of single lines, and of "trawl" or "long lines," &c., &c.? (5.) *The quantity of fish taken.* What the Royal Commission would reply to No. 5 may be taken from their own report (p. 10.) "With the exception of the statistics of the northern herring fishery, there are no means of ascertaining, even approximately, the annual yield of fish on the coasts of the United Kingdom." They then give returns, "confessedly incomplete," of the amount of fish carried on certain railroads; and further, they show the increased quantities thrown on certain commercial centres, like London. But what logic is this? There are increased quantities of grouse thrown on the markets of New York and Boston, but the grouse themselves rapidly *decrease*. Again, of these increased quantities what proportion is British fish, and what part is furnished by foreign boats? So long as a Commission does not use its own eyes, and is in ignorance of the statistics of fishing-tackle, time occupied, and amount of fish taken, at the present and at former periods throughout Great Britain, and is driven to depend on the evidence of men, some of whom might be reduced to want if they told the truth, the public will be excusable for taking its conclusions with caution. There is yet another error forcibly pointed out and illustrated by Rimbaud: an error which so able a man as Huxley would hardly have fallen into, had he applied the usual methods of original research; and that

is the confounding under the common name "fish" of all of that vertebrate class taken by fishermen. Rimbaud, on the contrary, shows that a *classification* of fishes is needed, and that each division must be considered separately—a classification founded not on anatomical characters, but on *habits* and *locality*. It is indeed, not a naturalist's but a fisherman's classification, and one that is recognized in the markets of South France. The divisions are four: (1) Wandering fishes (*Poisson nomade*); (2) White fishes (*Poisson blanc*); (3) Bottom fishes (*Poisson de roche*; or, *Poisson de fond*); (4) alien, or outside fishes (*Poisson forain*). The difference chiefly to be borne in mind is this: that whereas the wandering fishes (herrings, sardines, &c.) appear on the coasts only when "migrating," and then in vast, but uncertain troops, the white (bass, mullet, &c.) and bottom (sole, sea-perch, &c.) fishes, especially the latter, are essentially *domestic*, and dwell and multiply on particular localities along the coast. We need hardly consider the fourth division, which includes chiefly rays and dog-fish, both of which are used for food in France, but not in this country. The White fishes are all swift swimmers, whether they frequent the lower or the middle water, or the surface. In winter they retreat to great depths, off the coasts; but, as the warm weather approaches, they near the land, and rove hither and thither, attracted by the currents or driven by predatory enemies. The Bottom fishes live on or near the bottom, and in comparatively shallow water; some frequent the kelpy rocks, like the sea-perches; others lie on muddy bottoms, such as the turbot and the sole; but all remain on their grounds the year round, and the colder it is, the more they hug the shore. Now, both Rimbaud and Berthelot insist that White and Bottom fishes may, *from their very localization*, be exhausted by improper fishing; whereas, the Wandering fishes, numerous by nature, and protected from attack by their uncertain movements, and their total disappearance for certain seasons, are, in favorable zones, not to be diminished by human means; and they further insist, with entire truth, that the British commissioners have not discriminated between these divisions, but, by confounding them, have vitiated their whole reasoning. Bringing facts to support his theory, Rimbaud cites a list of species (p. 97) which, within his own memory, have disappeared from, or much diminished in, the Gulf of Marseilles; and he cites the continued abundance of fish in Corsica and on the African coast, where the beam-trawl* is not used. If we follow up his calculations (p. 284;

* The so-called trawl, of which there are several varieties, is essentially a very long bag-net, with a wide mouth held open by a frame or other contrivance, and with net wings on either side of the mouth. This is dragged along the bottom, by the boat under

Berthelot, page 297) we shall see that each great trawl, supposing its track to be fifty feet wide, will annually scrape 25,000 acres of sea-bottom.

Berthelot devotes a large part of his book to a critical comparison of the fisheries on the Mediterranean coast of France in 1842 and in 1862. On both these occasions he made an official examination of a marine district with which he had been familiar from boyhood. His testimony as to the decrease of these fisheries is emphatic. Some classes of fishermen, like the *palangriers* of Marseilles, had abandoned their trade and left the country. This singular little colony was an emigration of Spanish Catalans, who came over in 1721, and remained near the city for over a century. Of all people, the Catalans are, perhaps, the most expert and daring fishermen, and they are specially noted for their skill with the *palangre* (called long-line in England and trawl-line in America), a long cord to which are attached, at regular intervals, short gangeings, each bearing a baited hook. This *palangre* is paid out and sunk on the sea bottom, the ends being marked by buoys. For many years, the Catalans drove a profitable trade; but the fish gradually got scarcer, after trawling was introduced, and the colonists at last left in a body for Spain. The Catalans were also great steel workers, and introduced those hooks of soft white iron which the French *palangriers* still use on the banks of Newfoundland. This hook, instead of being pushed back through the lip of the fish, is

sail, and every kind of marine animal and plant, with stones, rubbish, and even ships' anchors (!) are tumbled into it in one confused mass. The British commissioners state (from an *a priori* view) that the trawl cannot well scrape spawn off the bottom; but the very name in French (*Eissaugue*) signifies *seaweed-hoister*, and with the seaweed comes the spawn. Another sort is *le petit ganguy*, which is drawn either by two boats running before the wind, at about three knots (*pêche aux boeufs*), or by a single boat, which often makes fast the hauling-lines fore and aft, and then takes what the mackerelers call "a side drift" (*pêche a la vache*). Not all the other nets and lines put together have caused as much quarrelling, and even bloodshed, as these trawls. The line fishermen and seiners accuse them of so scraping and re-scraping the breeding-beds as to destroy vast quantities of spawn and young fry, and eventually to diminish certain species; and, moreover, charge that they carry away nets, lines and buoys in their constant journeyings. In Galway (where Her Majesty's subjects are not so docile as they might be) the common fishermen rose against the trawlers, and in such terror were these last, that they dared not publicly testify before the Commission. Captain Atwood informs us that a trawl was tried in Massachusetts Bay; but the Irish set-hookmen (trawl-lines so-called here) would not allow it used. In France, laws have been passed, over and over, against them; and the same is true of some parts of Spain. There must be some foundation for such violent denunciation. The British Commission imply that this denunciation is simply that which always rises against improved machinery. On the other hand, Rimbaud and Berthelot say it is well founded, and that these engines really do kill out the White and Bottom fishes. The trawlers persuaded the Commission that the market could not be supplied without their aid; but, certainly, few countries are better supplied with various and fine fishes than the United States, where no trawl is used.

pulled straight out, and is then again bent in a curve by a simple contrivance carried in each boat. In every port, Berthelot found a decline in most of the fisheries which had formerly been of great importance, and, in each case, the complaint was of the *grand art*—that is, the great trawl, worked by two sail boats. He cites an important body of statistics, from the Province of Cadiz, Sanlucar Huelva and Malaga, in Spain (p. 293).

	KILOGRAMMES [OF FISH.*]		Number of Men, 1861.	Kilogrammes per Man, 1861.
	1831.	1861.		
Cadiz, . . .	1,095,225	2,342,137	1,749	1,337
Sanlucar, . . .	450,237	1,070,050	760	1,408
Huelva, . . .	896,475	2,818,525	2,069	1,360
Malaga, . . .	660,925	7,778,162	3,415	2,277
Totals, . . .	3,102,862	14,008,874	7,993	—

In comparing these figures we see, that in 1861, Malaga caught less than any, except Sanlucar; but in 1861 she took *more than the other three together*. Further, Malaga took fifty per cent. more fish *to each man* than did the others. What is the difference in the condition? On the Malaga coast, fishing with the great trawl-net (*aux boeufs*) has been *prohibited* since 1828, while in the three other departments it has *been allowed*, and much practised. Berthelot further proves that trawl-net fishing makes fewer and poorer sailors than any other method—a matter of great importance to France, where seamen are always too few. However removed from absolute accuracy they may be, these statistics and these criticisms certainly seem more the work of masters of the subject than the conclusions of the British Commission. It is true, we must bear in mind the difference of the marine faunæ in the Mediterranean and in the German Ocean, and the different conditions of animal life. Nevertheless, there are some general principles which must guide the investigation in both cases. Thus, Rimbaud says with great force, that so long as he knows that fishermen have to go farther and farther, and fish more and more carefully, for their fare, nothing will persuade him (or the fishermen!) that fish are as

* A kilogramme is about two pounds. The total catch of 1861, then, would be over 14,000 tons, though this is not more than one-sixth the weight of fish sent annually to the London market.

plenty as formerly. Perhaps the most reliable part of the British testimony is that which sets forth the immense increase in the men and boats (except Irish) employed; and in the size and destructive effect of the nets. It also indicates the exertions of all the men to bring in everything taken. Whereas they often used to throw half a fare overboard, now they bring in every minnow (p. 14). And yet, with all this saving and this increase of means, it does not appear (if one may judge from the imperfect statistics) that the augmentation of *product* is in any proportion to the augmentation of *labor* and *engines*. On the other hand, it is admitted that the price of fish has advanced (p. 14) somewhat in the interior, and has doubled on the seacoast. But then, not advanced so much as that of butcher's meat. And why has butcher's meat grown dearer? Dr. Gamgee will tell us, it is from the scarcity of cattle; and so the advance in fish may be from the scarcity of fish. Of course the testimony is, as the royal commissioners very frankly tell us, entirely conflicting. Sometimes, however, a person of neutral position makes some very precise statements; as when a clergyman (question 5688) testifies that a certain extensive fishing ground was swept utterly clean of fish by the trawlers. Here was a true case of the destruction of the *poisson blanc* and the *poisson de fond*. Even the Wandering fishes are held by some authorities to have been reduced by improper fishing. Thus Bertram, in his *Harvest of the Sea* (p. 278), shows that, in the great Wick herring fishery, the extent of nets has much increased, while the catch per boat has diminished. This may or may not show a *general* scarcity of fish. On our own coast we are familiar with the singular variation in the mackerel fishery, and in that of menhaden (*Alosa menhaden*). At times our bays will be crowded with their vast schools—suddenly they fly in a panic: the blue-fish (*Temnodon saltator*) are among them, and within twenty-four hours not a mackerel or menhaden is to be seen. This is not scarcity, but *absence*. When mackerel are away, the little lobsters do play, and they increase in numbers; and their present abundance is a true abundance, resulting from the absence of their enemies. The European herring* (*Clupea harengus*) is known to be eccentric in its movements: sometimes the Scotch variety will strike across to Scandinavia, while those of that

* The herrings, according to Mr. Boeck, are by no means great wanderers as a rule. They dwell in the deep submarine valleys, usually not more than seven miles from the Norwegian coast, and approach the shore to spawn. They discharge their ova in from 10 to 150 fathoms (usually in 100). On the European shores they are found from the 47th to the 67th parallel, but they quit water which is below 40° Fahrenheit. See J. L. Soubeiran; *L'Exposition de Produits et Engins de pêche à Bergen, 1866*, p. 68.

coast will appear at points further north. Yet on the whole, we may say that the herring harvest has always been an abundant one, whether in the historic Dutch times, or in these days of the Scotch and Norwegians. In 1603, the Dutch herring crop, besides what they themselves consumed, sold for nearly £5,000,000. The annual cure of Scotch herring is over 3,000,000 barrels. The winter fishery of Norway gives over 700,000.

So, too, the cod fishery seems unfailing on the chief grounds, such as the Grand Bank and the celebrated Vestfjord. The latter has been closely fished for centuries with no diminution in the yield.*

As to the general and vital question of exhausting fisheries, we stated at the outset that we might hope to get an idea "of the difficulties of the subject, if not of the subject itself." And, while we cannot say that either party to the discussion has *proved* anything, the points indicated are the following: 1. That no amount or kind of fishing can diminish the "schooling" or Wandering fishes of the high seas, such as the herring (*Clupea elongata*), mackerel (*Scomber vernalis*), menhaden (*Alosa menhaden*), cod (*Morrhua Americana*), &c. 2. That the local and bottom fishes, which are peculiar to certain limited areas near the shore, may be greatly reduced, or even practically annihilated, in certain places, by improper fishing. Such are the tautog (*Tautoga Americana*), the sea-perch (*Ctenolabrus caeruleus*), the flounder (*Platessa plana*), the striped bass (*Labrax lineatus*), and the scup (*Sparus argyrops*), &c. What "improper fishing" is, and what particular species are most easily killed out by it, remain to be seen. It is sufficient to remark that our shore population is beginning to complain of a diminution in many species; and it behoves the government to collect such statistics as will suggest an intelligent action to the legislature.

* The Vestfjord lies between the Loffoten Islands and the mainland of Norway. The cod, seeking protection and the warm water of the Gulf Stream for their spawn, stand in during February in countless troops. The fishermen absolutely cast the lead to find the school by its striking the backs of the fish! The annual cure of codfish in Norway is about 19,000 tons, chiefly from the Loffoten Islands (Soubeiran, p. 50).



FIFTH ANNUAL REPORT

OF THE

COMMISSIONERS

ON

INLAND FISHERIES.

JANUARY, 1871.

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1871.

CP

Commonwealth of Massachusetts.

R E P O R T.

The Commissioners on Inland Fisheries, under chapter 384 of the Acts of 1869, beg leave respectfully to present their Fifth Annual Report.

FISHWAYS.

(1.) *At Holyoke.*—The case of the Commonwealth *versus* The Holyoke Water Power Company, has been recently decided in favor of the complainants by the supreme court. A great variety of argument was brought to bear, especially on the part of the respondents, but the central point may be thus set forth. 1. Dam owners are required by common law to maintain fishways. 2. The Holyoke Company was required, by its charter, to pay for the fish rights injured *above* its dam; and, *therefore*, the company claimed by implication an exemption from a fishway. 3. But, in chartered rights, the presumption is against the grantees, and nothing is held by them which is not expressly granted. 4. Therefore no implication can free the company from the common-law obligation to build a fishway. This decision, if confirmed by the United States supreme court, to which the case has been appealed, will save the State an outlay of at least \$25,000. For several years, and against much doubt and discouragement, the Commissioners have held that this company was sheltering itself behind an erroneous construction of its charter; and now our highest judicial tribunal has confirmed this opinion.* It is but fair to add that the Turner's Falls Company, the next great dam on the river above, has shown an excellent spirit, and has offered to put up a suitable fishway, even in advance of the requirements of the law.

* See Appendix D.

(2.) *At Lawrence.*—The top hamper of this way has been again remodelled, and the flow of water has at last been made almost perfect. It has also been made so strong as to resist any ordinary violence.

(3.) *On Smaller Streams.*—Fishways have been finished on the Weweantit and Herring (Harwich) rivers, except in the cases of two delinquents, against whom proceedings are begun. At Kingston an excellent one has been put up by Mr. Drew, the mill owner. The upper fishway at Middleborough has been so modified as freely to admit alewives to their extensive spawning grounds. The passes on Mystic River and ponds are now of the most approved forms, and their success is all that could be desired. It is estimated that at least \$2,000 worth of alewives passed Whitney's dam this season. Some steps, also, have been taken to open Neponset and Shawsheen rivers. In general it may be said that the mill owners have modified their views a great deal since they have seen *how little water* is used by the improved fishway, and that too chiefly in flood times. Many persons who feared their water-power would be impaired now are strong advocates for fish culture.

FISH CULTURE.

(1.) *Of the Alewife (Alosa tyrannus).*—Increasing attention is everywhere given to this little fish, and the ease of its culture, together with its abundant yield, encourage the further improvement of the fisheries.

(2.) *Of the Shad (Alosa praestabilis).*—Mr. James Rankin, lately Commissioner of Connecticut, hatched shad during the past season at Hadley Falls, using the apparatus of this Commonwealth, and by the permission of its Commissioners. He had entire success and turned loose, by estimate, over 60,000,000 of embryos. The season was remarkable for the great take of fish in the river, which was the more striking because of the gradual decrease of the fishery for many years. On Sunday, May 21, vessels in Long Island Sound observed the unusual spectacle of vast shoals of shad. The next day they struck in, at and about the mouth of the river, and filled the nets. At Lincoln, ten miles from the mouth and on the coast, 3,560 fish were taken in one pound (500 is usually a large catch), and the total yield of the pounds for that day was over 25,000. At

Haddam Island, a short distance up the river, 700 were taken at one sweep of the seine, which is more than one-third the yield of a similar seine for the *whole of the previous season*. A seine four miles below Hartford took 900 shad the *same day*. As this is some fifty miles up the river, it is plain that the schools struck in all at once, and that those which headed for the stream kept on with great rapidity. Now it does not appear that on the Hudson, to the west, or on the Merrimack, to the east, the run of shad was unusual; on the contrary, both those rivers report a small average. Whence then this *local* phenomenon? The Connecticut people call them "Green's shad," attributing the increase to the artificial hatching by Seth Green, at Hadley Falls, in 1867; and this opinion gets color from the fact that, in 1868, the small *yearling* fish were unusually plenty. But it is further to be noticed that, in 1868, the Connecticut assembly passed an Act forbidding any mesh of less than *five inches* on the pounds, whereas the mesh used to be as small as $2\frac{1}{2}$ inches; and furthermore, a "close time" of thirty-six hours in the week was established. The direct result of this was that the yearlings, two-year-olds, and perhaps some three-year-olds, instead of being stopped,* escaped through the meshes, and were ready to return this year as much larger fish. If this remarkable run turns out to be really peculiar to the Connecticut, it will be fair to seek its causes partly in the artificial hatching that has gone on for three seasons at Hadley Falls, and partly in the wise law which limited the mesh of the pounds; and it can scarcely be doubted that, if the drag-net men, the seine men, and the pound men will exercise forbearance, they will all be repaid many fold in the regular supply of large and numerous fish.

On the Merrimack artificial hatching was carried on by the State, but only at the place of Mr. A. C. Hardy. The process was the same as last year,† but labored under the disadvantage of having no pool to keep the fish in till ripe. Moreover a great deal of spawn was lost by reason of impurities which came down a brook in which some of it was placed to be hatched. Some spawn was sent to Lake Winnepisseogee, some was carried to Mystic River, and a large quantity was used for the Merrimack itself. The following tables will show the daily detail of the fishery:—

* See Rep. for 1867, p. 11; 1868, p. 14; 1869, p. 22.

† Report for 1869, p. 7.

[The sign P. M. is used for *night*, including the hours after midnight.]

D A T E.	Shad taken.	Males.	Females.	AIR AT—			WATER AT—			Weather.	Time of Hauling Seine— P. M.	Number of Fish at each Sweep—P. M.	Spawns taken.
				6 A. M.	12 M.	6 P. M.	6 A. M.	12 M.	6 P. M.				
June 1,	62	—	—	—	—	—	—	—	—	Pleasant,	5.30, 8,	19, 43, .	—
2,	83	—	—	—	—	—	73	—	—	"	4, 8, 9.30, 11.30, 1,	7, 40, 20, 4, 5, .	—
3,	126	32	94	—	—	—	74	—	—	"	4, 5, 6, 8, 10, 12, .	20, 0, 7, 60, 27, 12,	—
4,	63	—	—	—	65	—	—	73	—	Warm, pleasant,	{ 4, 5, 8, 9.30, 11, } { 12, 1, . }	{ 1, 0, 20, 18, 10, 9, } { 4, . . . }	—
5,	84	—	—	—	70	—	—	74	—	Clear and warm,	{ 8, 9.30, 10.30, 12, } { 1, . }	35, 20, 16, 13, 0, .	100,000
6,	86	—	—	—	65	—	—	70	—	Dull and cloudy,	{ 8, 9, 10.30, 11.30, } { 12.30, . }	36, 22, 12, 8, 6, .	200,000
7,	26	18	8	—	61	—	—	65	—	"	8, 9, 10.30, 12, .	12, 8, 4, 2, .	50,000
8,	44	—	—	—	—	63	—	—	73	"	8, 9, 10, 11, 12, 1,	7, 8, 11, 12, 4, 2, .	—
9,	45	30	12	—	52	—	—	60	—	Cloudy and cold,	{ 8, 9.30, 10.30, } { 11.30, 12.30, . }	20, 8, 7, 5, 5, .	50,000
10,	64	31	18	52	55	52	60	65	65	Dull and cold, .	{ 4, 5, 6, 8, 9, 10, } { 11, 12, . . }	{ 11, 11, 1, 0, 15, 16, } { 6, 4, . . }	200,000
11,	21	14	7	53	64	53	64	61	64	Misty and cloudy,	5, 6, 8, 9, 10, 12, 1,	0, 1, 5, 7, 5, 3, .	—
12,	70	12	58	61	67	66	63	67	65	Clear, . . .	{ 8, 8.45, 9.30, 10.15, } { 11, 12, 1, 2, . }	{ 15, 20, 10, 9, 6, 5, } { 3, 2, . . }	—
14,	35	15	20	68	78	74	68	70	72	Pleasant, . . .	8, 9, 10, 11½, 12, 1,	12, 4, 6, 8, 3, 2, .	10,000

June 15,	25	7	18	62	82	78	68	70	73	Clear, warm,	.	{ 8, 9, 10.30, 11.30, } { 12.30, 1.30, }	3, 4, 11, 3, 3, 1,	200,000
16,	39	12	27	72	83	74	72	76	76	Warm, showery,	.	{ 8.30, 9.30, 11, 12, } { 1, 2, }	6, 3, 18, 8, 3, 1,	-
17,	26	9	17	71	74	73	73	73	74	Bright, warm,	.	{ 8, 9.30, 10.30, } { 11.30, 12.30, }	15, 0, 5, 3, 2, 1,	120,000
18,	30	9	21	66	82	91	70	75	76	Clear, warm,	.	8.30, 9.30, 11, 12, 1,	5, 8, 6, 7, 4,	21,000
19,	29	4	25	63	70	64	71	76	74	Cloudy, dull,	.	8, 9, 10, 11, 12, 1, .	5, 6, 3, 6, 5, 3,	25,000
20,	18	4	14	68	85	73	71	76	76	Thunder storm,	.	8, 9, 11, .	4, 8, 6,	175,000
21,	30	14	16	63	65	54	72	73	70	Clear, cold,	.	{ 8, 9, 10.30, 11.30, } { 12.30, 1.30, }	5, 3, 9, 6, 5, 2,	25,000
22,	30	17	13	54	58	56	68	70	69	Fair,	.	{ 8, 9, 10.30, 11.30, } { 12.30, }	22, 0, 6, 2, 0,	50,000
23,	26	21	5	62	72	75	68	69	70	Clear,	.	{ 8, 9, 10.30, 11.30, } { 1, 2.30, }	13, 4, 3, 4, 3, 0,	10,000
24,	26	22	4	74	87	93	71	76	76	"	.	{ 8.30, 9.30, 10.30, } { 12, 3, }	12, 6, 5, 0, 3,	-
25,	18	14	4	79	92	93	73	73	78	Thunder,	.	8.30, 9.30, 11, 12, .	8, 4, 4, 2,	-
26,	31	25	6	71	68	64	70	68	68	Cloudy, dull,	.	{ 8.30, 9.30, 10.30, } { 11, 12.30, }	11, 8, 5, 5, 2,	100,000
27,	25	10	15	62	76	78	68	73	74	Cloudy, thunder,	.	{ 8, 9, 10, 11.30, } { 12.30, }	7, 8, 4, 5, 1,	25,000
28,	18	6	12	69	86	88	68	76	76	Clear, thunder,	.	{ 8.30, 9.30, 10.30, } { 12, 1, }	6, 4, 3, 2, 3,	75,000
29,	22	8	14	70	80	79	71	78	77	-	-	8.30, 10, 11, 12, .	12, 7, 3, 0,	125,000
30,	18	6	12	68	82	84	72	78	79	Cloudy, thunder,	.	8.30, 10, 11, 12, .	8, 0, 3, 1,	-

D A T E.	Shad taken.	Males.	Females.	A I R A T —			W A T E R A T —			Weather.	Time of Hauling Seine— P. M.	Number of Fish at each Sweep—P. M.	Spawn taken.
				6 A. M.	12 M.	6 P. M.	6 A. M.	12 M.	6 P. M.				
July 1, .	19	8	11	60	66	66	66	72	74	Clear,	8.30, 9.30, 11, 12,	8, 6, 3, 2,	20,000
2, .	17	6	11	65	72	70	71	76	74	"	8.30, 10, 11, 12.30,	4, 6, 4, 3,	25,000
3, .	15	6	9	60	63	66	70	78	76	Cloudy,	{ 8.30, 9.30, 11, } 12.30, }	6, 7, 2, 0,	30,000
4, .	13	2	11	58	70	72	67	72	62	Clear,	8.30, 10, 11, 12, .	4, 4, 3, 2,	50,000
5, .	15	6	9	60	65	72	65	73	75	"	{ 8.30, 9.30, 10.30, } 12, }	10, 3, 2, 0,	40,000
6, .	26	9	17	72	82	76	66	76	75	Cloudy,	9, 10, 11.30, 12.30,	12, 8, 4, 2,	25,000
7, .	4	4	—	66	74	74	70	76	78	"	8.30, 10, 11.30, .	2, 2, 0, .	—
8, .	9	7	2	68	67	70	70	71	71	Clear,	7, 8.30, 10, 11.30,	0, 4, 3, 2,	10,000
9, .	6	2	4	64	72	76	70	71	71	"	8, 9.30, 10.30, 12,	2, 2, 1, 1,	25,000
10, .	10	4	6	68	84	82	72	76	75	"	{ 8.30, 9.30, 10.30, } 12, }	4, 3, 2, 1,	75,000
11, .	1	1	—	72	82	81	72	77	76	"	{ 8.30, 9.30, 10.30, } 11.30, }	0, 1, 0, 0,	—
12, .	6	2	4	72	78	86	76	76	76	"	8.30, 10, 11, 12, .	3, 2, 1, 0,	—
13, .	1	—	1	63	81	80	67	80	78	"	1, 9½, 10½, 11½, .	0, 1, 0, 0,	—

July 14,	.	2	-	2	72	86	85	76	80	79	Clear,	.	.	9, 10.30, 12, .	.	2, 0, 0, .	.	.
15,	.	4	1	3	63	77	80	70	76	79	"	.	.	8.30, 10, 11, 12, .	.	3, 1, 0, 0,	.	.
16,	.	3	1	2	68	79	82	71	82	82	Cloudy,	.	.	8.30, 10, 11.30, .	.	2, 1, 0, .	.	.
17,	.	3	2	1	75	92	91	74	78	82	Clear,	.	.	9, 10.30, 11.30, .	.	2, 1, 0, .	.	.
18,	.	-	-	-	70	85	82	76	82	80	"	.	.	8.30, 10, 11, 12, .	.	0, 0, 0, 0,	.	.
19,	.	-	-	-	74	79	78	74	76	77	"	.	.	9, 10.30, 11.30, .	.	0, 0, 0, .	.	.

In taking the averages of these tables and comparing them with the results of last year, we find the following proportions in the fish taken :—

	Whole No. Taken.	Males to Females.
1869.		
June 10-26=16 days,	1,207	5 : 2
June 26-July 28=32 days,	465	3 : 2
1870.		
June 9-24=14 days,	487	3 : 4
June 24-July 19=36 days,	312	1 : 1

While the two years agree in the fact that more fish are taken in the first third of the season than in the last two-thirds, they disagree in the proportion of males, which are about equal in number to the females this year, while they were three or four times more numerous during the last year. A reason for this is that the seining was all done during the *night* in 1870, while in 1869 the seine was hauled both morning and night, and it is at the latter time that most females are usually captured. Nevertheless, despite such modifying conditions, it is probable that the males were much less numerous than they sometimes are. It cannot be said that the fishing was really poorer this season, because the night seining was much the same in each year. On the other hand, there is no increase of large fish, nor is this to be looked for till next year or the year after.

The mean temperatures of air and water, during the hottest part of the day, were as follows :—

	Air.	Water.
1869.		
June,	71°	66°
July (11 days),	65°	65°
1870.		
June (27 days),	72°	71½°
July (19 days),	76½°	76°

From these averages it appears that the mean summer temperatures of the water of this portion of the Merrimack are about the same as those of the air.

By aid of the State police the fishery laws were pretty well carried out, and several persons who illegally seined shad were prosecuted both here and on the Connecticut. The laws would be still better enforced were it not that towns are often extremely negligent in their appointment of fish wardens.

(3.) *Of the Smelt (Osmerus viridescens).*—The Acts of 1868 and 1869 have apparently had a direct effect in increasing these fish by protecting them from nets, on or near their spawning grounds. The present season has proved even better than the last, and the hook-and-line men everywhere report a good catch, and often an increase of large specimens.

(4.) *Of the Salmon (Salmo salar).*—Of those raised on joint account for New Hampshire and Massachusetts by Messrs. Robinson and Hoyt, somewhat over 1,000 were set free last summer in waters connected with the Pemigewasset. This was a great falling off from the number hoped for. Mr. Brackett set free in the Mystic River about 700 raised by himself. These two lots were hatched the winter of 1868-69. Messrs. Bacon, Dexter and Coolidge placed those raised by them,—about 1,500,—in one of the streams of Cape Cod. In another Cape Cod stream several hundred young salmon were placed, from the State hatching-house. It should be added, as a much more important item, that 2,000 salmon fry were put in a tributary of the Connecticut, within the limits of Vermont, in the spring of 1869, and about 30,000 more in the spring of 1870, by Professor Hager, late Commissioner of that State. The State hatching-house at Wareham was closed last spring, partly because the experiments had been carried far enough, and partly by reason of the death of Mr. Samuel T. Tisdale, who had done so much to insure its success. This gentleman was one of the earliest and most energetic advocates of pisciculture.* A large manufacturer of iron, he owned the water-power of the Agawam River and its tributaries, besides extensive tracks in the noted Plymouth woods, beset with many fine ponds. His natural enthusiasm for woodcraft, and especially for fishing, led him,

* An account of the introduction of black bass, from his own pen, will be found in Appendix C.

many years ago, to undertake the preservation and improvement of the fisheries ; and his influence and example were very useful to the enterprise. His quaint old house at Agawam, with its endless doors and rooms, its portraits of noted hunters and fishermen, its fine pictures of game fish, and its array of nets and fly-rods, was the *beau idéal* of the followers of Isaac Walton, to whom its hospitable gate was ever open.

When the Commissioners sought a place for their experiments, Mr. Tisdale offered the free use of the noted Maple Spring, a tributary of Agawam River ; and he not only superintended the work, but expended a considerable sum in furthering it. During its two seasons, from November, 1868, to May, 1870, there were hatched at this small establishment the following fishes :—

True salmon (<i>Salmo salar</i>),	. . .	3,320
St. Croix land-locked salmon (<i>Salmo sp.?</i>),	. .	4,575
Brook trout (<i>Salmo fontinalis</i>),	. . .	20,281
Togue or Lake trout (<i>Salmo toma</i>),	. .	2,450
White fish (<i>Coregonus albus</i>),	. . .	30
Charr (<i>Salmo umbla</i>),	. . . .	4
		<hr/>
		30,660

The whole place, with its hatching-house, pools for breeders, and runways for the fry, still remains in excellent condition for future work.

The temperatures of the air and water were continued daily until the closing in May, and were usually taken at about 9 A. M.

Temperature of Water and Air.

	Water.	Air.		Water.	Air.		Water.	Air.
1869.			1870.			1870.		
Dec. 1,	48	44	Jan. 14,	44	24	Feb. 28,	44	34
2,	45	29	15,	46	38			
3,	44	29	16,	46	42	Mar. 1,	46	36
4,	44	34	17,	46	44	2,	46	32
5,	46	40	18,	48	42	3,	44	28
6,	46	38	19,	46	37	4,	44	32
7,	43	26	20,	44	40	5,	46	34
8,	44	24	21,	46	40	6,	48	38
9,	43	28	22,	45	38	7,	44	32
10,	46	40	23,	45	49	8,	46	34
11,	44	32	24,	47	40	9,	46	34
12,	46	38	25,	48	52	11,	46	32
13,	46	38	26,	48	46	13,	42	32
14,	44	34	27,	50	52	15,	46	50
15,	44	38	28,	48	42	17,	46	31
16,	45	40	29,	45	36	18,	46	34
17,	47	38	30,	46	40	20,	51	46
18,	46	38	31,	45	36	22,	48	42
19,	45	34				23,	48	47
20,	44	32	Feb. 1,	45	30	24,	47	38
21,	42	32	2,	44	29	25,	47	30
22,	46	46	3,	46	33	27,	49	38
23,	45	41	4,	45	27	29,	49	42
24,	43	32	5,	45	33	31,	49	46
25,	45	42	6,	46	36			
26,	46	45	7,	48	37	Apr. 3,	47	37
27,	47	42	8,	46	32	4,	47	39
28,	49	52	9,	46	32	6,	47	42
29,	48	46	10,	46	33	7,	49	46
30,	47	39	11,	46	31	8,	49	48
31,	45	36	12,	46	46	9,	50	52
			13,	46	28	10,	51	56
1870.			14,	44	36	11,	49	50
Jan. 1,	44	48	15,	46	36	12,	45	48
2,	48	52	16,	48	34	13,	50	56
3,	47	52	17,	46	36	14,	51	60
4,	45	34	18,	44	38	16,	49	46
5,	45	32	19,	48	38	17,	48	45
6,	43	32	20,	47	39	21,	56	50
7,	46	32	21,	46	29	23,	54	58
8,	44	32	22,	43	19	24,	54	59
9,	44	22	23,	44	28	26,	54	60
10,	45	36	24,	46	30	28,	52	58
11,	46	38	25,	42	16	29,	53	60
12,	46	48	26,	44	24	30,	53	61
13,	47	45	27,	46	31	May 3,	52	59

Mean Temperatures.

	Air.	Water.
December, 1869,	37	45.3
January, 1870,	40	46
February, "	32	45.5
March, " (22 days),	36.7	46.5
April, " (20 days),	51.5	50.4
Mean of three winter months, 1870,	36.3	45.6
" " " 1869,	31.4	45.8

The temperature of the water was often observed to fall before a storm, just as it did last year. (See Report for 1869, p. 30.)

(5.) *Of the St. Croix Land-locked Salmon (Salmo sp.?).*—Mr. John Shields was sent to Grand Lake stream, in Maine, in the autumn of 1869, and he brought back, as the share of Massachusetts, 11,350 eggs. Of these, 1,100 were sent to Mr. E. A. Brackett, at Winchester, and to Mr. D. H. Gilbert, at Plymouth, and the remainder were kept in the State hatching-house, with the following result:—

Eggs deposited,	10,250
Defective,	7,475
Hatched,	2,775
Young died,	218
Alive, April 12, 1870,	2,557

An evil destiny seemed to preside over this enterprise; for, not only was the number of eggs less than had been expected, but the proportion of impregnated ova was smaller than last year; and, at last, when the fry were moved to the pools at Winchester, by reason of the closing of hatching-house, the water proved unsuitable, and, during the extraordinary heat of the past summer, nearly all of them were lost. The yearling fish, however, did remarkably well. These consisted of true and land-locked salmon mixed together. They were taken

from the runways at Wareham and were set free in suitable waters, where they ought to be heard from within four or five years.

(6.) *Of the Sebago Land-locked Salmon (Salmo sebago).*—Mr. Brackett made an expedition to Songo River to get breeders of this species. He was assisted by Robert R. Holmes, a man of experience in the handling of live fish. Dr. Fletcher, Commissioner of New Hampshire, met them there and was of great service in procuring and transporting the salmon. They succeeded in capturing a good number of fine specimens, but lost a part of them owing to the delays of a heavy storm on the lake. Four large females and the same number of males got through safely and were placed in the breeding pools. It was noticed that the females had much less vitality than the males, and died if deprived of proper water. The males, even when placed in a small tank, fought violently, and their combativeness could be restrained only by icing the water continually. This salmon, from its large size, its land-locked habit, the excellence of its flesh, its game qualities, and its ability to hold its own against pickerel, promises to be a valuable addition to our cultivated species. From these fish several thousand ova have already been obtained.

(7.) *Of the Togue or Lake Trout (Salmo toma).*—The lot hatched in the winter of 1868-69 proved hardy and made a good growth. They met with only one considerable accident, whereby over 300 were killed by leaping on the horizontal netting that closed the lower end of their runway. Fish-breeders cannot be too often warned of the need of great care in the use of flumes, nettings, dams and other contrivances for confining fish. When any of these get clogged by floating matter they are liable to overflow, and the fry either escape, or, what is worse, they get caught and perish. The remainder of the togue were set free last spring in suitable waters, and will doubtless do well.

(8.) *Of the Brook Trout (Salmo fontinalis).*—As stated in the last report, they entered the races and began to spawn on the twentieth of October (1869), and the last spawn was deposited as late as near the end of December; these late eggs were, however, of no value; not only were they quite white and transparent, but nearly all of them were unimpregnated.

Whether this defect came from the exhaustion of the females at that season, or from the failure of the males, could not be ascertained. This barren spawn made a considerable difference in the result, which was as follows:—

Spawn taken,	.	.	.	.	.	.	25,967
Defective,	.	.	.	.	.	.	8,286
							<hr/>
Hatched,	.	.	.	.	.	.	16,681
Young died,	.	.	.	.	.	.	185
							<hr/>
Alive April 12, 1870,	.	.	.	.	.	.	16,496

The first trout hatched out December 13th, making 54 days, with the water at 46°. The whole batch did not hatch before the first week in March.*

(9.) *Of the Charr (Salmo umbla).*—Prof. Coste had the kindness to send from France a number of eggs of this valuable fish. Most unfortunately the packing was wholly inadequate for a voyage of that length; and only four or five of the ova retained enough vitality to hatch. The embryos were pale in color and delicate, and resembled those of the togue (*Salmo toma*), except that the yolk-sac was even less elongated. The species is therefore a trout in the fullest sense, and is as far as possible removed from a salmon, whose yolk-sac is always elongated and pointed. For carrying eggs a long distance, the device adopted by Mr. Shields is doubtless one of the best: a set of light wooden frames made to fit a tin box, and placed one above the other. On each frame is stretched a mosquito net, which supports a *single* layer of eggs. The space between the frames is packed with very wet moss; and the box is then fitted with a punctured tin cover, and is placed in a wooden case full of sawdust.

(10.) *Of the White Fish (Coregonus albus).*—A few eggs, sent by Mr. Seth Green, were hatched by way of experiment. They are to be treated exactly like trout eggs, but the embryos are so small and delicate that much more trouble would be

* Trout of very small size sometimes carry spawn. Rev. L. Stone took 67 eggs from a female that weighed only 1-2 an ounce. This was probably a specimen from some small brook where the growth was slow.

needed to confine them. A large number were hatched by the New Hampshire commissioners.

Of Black Bass (Grystes fasciatus).—This fish continues to increase in popularity ; and the Commissioners have been able to answer only a part of the requests for stocking ponds. At the present rate, it ought to replace the pickerel in our chief ponds within a few years. The latter fish, like all bad characters, makes a worse show the more he is studied. Dr. E. L. Sturtevant investigated their powers of eating, in the following manner. He put two young pickerel, about 5 inches long, in a trough with a great quantity of little minnows (*Cyprinoids*) of about one inch in length ; and these two pickerel ate 128 minnows the first day ; 132 the second ; and 150 the third ! And they increased one inch in length in forty-eight hours ! They were mere machines for the assimilation of other organisms !

The interest in fish culture is steadily increasing,* and increasing in the right way, tending to small establishments for the benefit of the households to which they are attached ; so that we may hope, one day, to see the trout pools as common as the poultry yards. Indeed, they would increase much faster than they do, were it not that people are deterred by the supposed expense and difficulty ; and this error is partly caused by writers on the subject, albeit unintentionally, and by the dealers in live fish, who often recommend, and perhaps keep for sale, a great quantity of apparatus, which is, in most cases, quite unnecessary. If a man who has a spring brook, will divide it off into proper sections for large and small fish, and will provide a

* The following prizes have been offered for Fish culture :

The Massachusetts Society for Promoting Agriculture, will, on March 1st, 1872, award two prizes, respectively of \$300, and of \$200, for the two best establishments for the culture of Food-Fishes within this State.

A Committee of the Trustees of said society will determine the awards, and reserve the right to withhold them, if, in their opinion, none of the establishments are worthy of them.

All competitors must send their names and addresses to the Secretary of the society, before December 1, 1871.

In determining the awards, the Committee will be guided by the following qualifications:—

1. The number of species of Fishes cultivated.
2. The number of individuals, and their size and condition.
3. The number of eggs hatched in the establishment, and of young reared from them.
4. The neatness and economy of the establishment, and the excellence of the fixtures.

EDWARD N. PERKINS, *Secretary.*

good spawning bed, he has only to put in some adult fish and let them multiply. He then can feed them as well as his means allow, and he will always have a good supply, by leaving, each year, a sufficient number of breeders.

The interest in pisciculture has been further exhibited by applications for the leasing of great ponds under chapter 384, section 9 of the Acts of 1869, commonly called the Act for encouraging the cultivation of useful fishes. Seven ponds have been leased during the year, as follows :—

N A M E .	Lessees.*	Date.	Term.
Tisbury Great Pond,	Allen Look and others,	1870. Feb. 23,	10 years.
Mendon Pond,	L. J. Wilson and another,	Apr. 6,	20 “
Baptist Pond, Newton,	F. C. Hyde and others,	Sept. 13,	20 “
Silver Lake, Wilmington,	C. O. Billings and others,	July 7,	20 “
Waushakum Pond, Framingham,	E. L. Sturtevant and others,	Feb. 5,	20 “
Archer's Pond, Wrentham,	William E. George,	Nov. 3,	15 “
Chauncey Pond, Westborough,	Trustees of State Reform School,	Apr. 1,	5 “

Seeing that the State has not been accustomed to make its inland fisheries a source of revenue, it was deemed consistent to charge only a nominal rent for the ponds, except where the rent was payable to towns. Great care was taken to find out if the lessees were responsible persons, and to ascertain if there were any valid objections to leasing the ponds which were applied for.†

In the case of Tisbury great pond there was much opposition; and a public hearing was held by the Commissioners to determine the rights of the parties. This is a tidal pond whenever the beach, which separates it from the sea, is cut through,

* Amount paid by the lessees as rent, as follows :—

Tisbury Great Pond.—Value of 1-20 of fish taken, except eels, payable to town of Tisbury.

Mendon Pond.—One dollar per year for six years, \$50 per year for rest of term, payable to town of Mendon.

Baptist Pond.—One dollar per year.

Silver Lake.—One dollar per year.

Waushakum Pond.—One dollar per year for six years, \$50 per year for rest of term, payable to Framingham.

Archer's Pond.—One dollar per year.

Chauncey Pond —One dollar.

† See Appendix F.

either artificially or by storms. The fishery (smelts, bass, white perch and alewives) is dependent, of course, on this opening. And, as it appeared that the *riparian proprietors* were the only persons who had a right, through their commissioners of sewers, to cut through this beach, it seemed just to grant a lease to the said proprietors, on such conditions as should insure the increase of the fishery, and should reimburse the townspeople for any loss they might constructively incur.

APPROPRIATION.

The appropriation last year was \$4,000 and the expenses have been as follows :—

Fish culture : salmon, land-locked salmon, lake trout,	
trout, black bass, shad, &c.,	\$1,541 10
Legal expenses, chiefly in the Holyoke case, . .	650 00
Fishways : at Lawrence, &c.,	1,203 09
Sundries,	69 25
	<hr/>
	\$3,463 44

There are now on hand, bills more than enough to exhaust the balance, and the Commissioners therefore respectfully recommend an appropriation of \$4,000.

THEODORE LYMAN,
E. A. BRACKETT,
THOS. TALBOT,
Commissioners on Inland Fisheries.

A P P E N D I X .

[A .]

NEW ENGLAND COMMISSIONERS ON INLAND FISHERIES.

MAINE.

CHARLES G. ATKINS, Augusta.

NEW HAMPSHIRE.

W. A. SANBORN, Weirs.
W. W. FLETCHER, Concord.
T. E. HATCH, Keene.

VERMONT.

M. C. EDMANDS, Weston.
M. GOLDSMITH, Rutland.

MASSACHUSETTS.*

THEODORE LYMAN, Brookline.
E. A. BRACKETT, Winchester.
THOMAS TALBOT, North Billerica.

CONNECTICUT.

W. M. HUDSON, Hartford.
ROBERT G. PIKE, Middletown.
— LORD, Old Saybrook.

RHODE ISLAND.

NEOTON DEXTER, Providence.
S. S. FOSS, Woonsocket.

* We have to lament the death, by a railroad accident, of Mr. Alfred R. Field, lately one of the Commissioners. He was among the most eminent railway engineers of Western Massachusetts; and his professional advice had been particularly valuable in the construction of the great fishways at Holyoke and Lawrence.

[B.]

LEGISLATION FOR 1870.

[Chap. 249.]

AN ACT for the protection of the Fisheries in the Head Waters of Buzzard's Bay.

Be it enacted, &c., as follows:

SECT. 1. No person shall draw, set, stretch or use any drag net, set net, purse or seine of any kind, or construct, maintain or use any fish weir, yard or pound for taking fish of any kind anywhere in the waters of Buzzard's Bay northerly of or within a straight line extended from the entrance to the harbor in West Falmouth to Bird Island light; thence in a straight line to Great Neck Point on the Marion shore, nor in any bay, cove, inlet, river, creek or stream bordering on or flowing into said waters within the limits aforesaid.

SECT. 2. Whoever violates any provision of this act, or aids or assists in violating the same, shall forfeit and pay to the use of any person who shall sue therefor, a sum of not less than twenty dollars nor more than one hundred dollars, to be recovered in an action of tort, in any court having jurisdiction of either party to such action; and shall also upon conviction of any violation of any provisions of this act before any justice or court competent to try the same, be imprisoned in the house of correction not exceeding sixty days, or pay a fine of not less than ten dollars or more than one hundred dollars, one-half to the use of the complainant and the other half to the use of the county within whose jurisdiction the offence was committed.

SECT. 3. Any net or seine used by any person in violating any provision of this act, together with any boat, craft or fishing apparatus used in unlawfully working such net or seine, and all fish found therewith, captured contrary to any provision of this act, shall be forfeited to the Commonwealth.

SECT. 4. All nets and seines in actual use set or stretched in violation of this act within the waters and limits aforesaid, holding fish contrary to any provisions of said act, are declared to be common nuisances. [*Approved May 16, 1870.*]

[Chap. 284.]

AN ACT for the protection of the Fisheries in the Vicinity of Nantucket.

Be it enacted, &c., as follows:

SECT. 1. It shall not be lawful for any person or persons to take any fish with any kind of net, or to set any net for the purpose of taking any fish therewith, within one mile from the shores of Nantucket, Tuckernuck, Smith's, Muskegat and Gravel Islands, without first obtaining permission of the selectmen of Nantucket.

SECT. 2. Every person violating any provision of this act, shall forfeit and pay for each offence a sum not less than fifty nor more than five hundred dollars.

SECT. 3. The town of Nantucket is hereby authorized to choose, at the annual town meeting, or at any meeting duly warned for that purpose, such number of fish wardens as may at the time be deemed necessary, who shall be sworn to the faithful discharge of their duty, whose duty it shall be to prosecute for every offence against any provision of this act.

SECT. 4. All vessels, boats, craft and apparatus of every kind employed in taking fish contrary to the provisions of this act, or having on board any such fish unlawfully taken, shall be liable for any fines, penalties, forfeitures and costs herein provided for, and may be attached on mesne process, and sold on execution as the property of the person or persons offending by the use thereof. And it shall be the duty of said fish wardens to seize such vessel, boat, craft or apparatus, and detain the same not exceeding forty-eight hours, in order that the same may be attached or arrested by due process of law: *provided, however*, that as soon as the master or owner of such vessel, boat, craft or apparatus shall pay the penalty required by the fish wardens, to the treasurer of the town of Nantucket, together with the accrued costs, such vessel, boat, craft or apparatus shall be discharged with the effects therein; and the ninth clause of section thirty-two of chapter one hundred and thirty-three of the General Statutes is hereby so modified that it shall not apply to boats, fishing-tackle and nets taken under the provisions of this act.

SECT. 5. All fines, penalties and forfeitures recovered and received by virtue of this act, shall go, one-half to the treasurer of the town of Nantucket, for the use of said town, the other half to the fish warden or fish wardens commencing the action; and said fines, penalties and forfeitures may be recovered, together with legal costs of suit, by an action of tort in any court of record proper to try the same.

SECT. 6. Chapter six of the acts of the year eighteen hundred

and fifty, chapter one hundred and fifty-six of the acts of the year eighteen hundred and fifty-five, and chapter ninety-five of the acts of the year eighteen hundred and fifty-eight are hereby repealed.

SECT. 7. This act shall take effect upon its passage. [*Approved May 27, 1870.*]

[Chap. 366.]

AN ACT to amend an Act for encouraging the Cultivation of Useful Fishes.

Be it enacted, &c., as follows:

SECT. 1. Section nine of chapter three hundred and eighty-four of the acts of the year eighteen hundred and sixty-nine is hereby so amended that the commissioners on inland fisheries shall have no authority to lease any great pond exceeding twenty acres in area situated within the limits of Dukes county.

SECT. 2. This act shall take effect upon its passage. [*Approved June 15, 1870.*]

[Chap. 369.]

AN ACT in relation to the taking of Shad in the Connecticut River.

Be it enacted, &c., as follows:

SECT. 1. The limitation of time for catching shad in the Connecticut River in this state, shall hereafter be the same as that now fixed, or which shall hereafter be prescribed by the legislature of Connecticut, for taking shad in said river in that state.

SECT. 2. All acts and parts of acts inconsistent with this act, are hereby repealed.

SECT. 3. This act shall take effect upon its passage. [*Approved June 18, 1870.*]

[Chap. 382.]

AN ACT to prohibit the taking of Black Bass in Lake Cochituate.

Be it enacted, &c., as follows:

Whoever catches, takes or destroys any black bass in the waters of Lake Cochituate in the towns of Natick, Wayland or Framingham in the county of Middlesex, shall forfeit for each offence not less than ten nor more than fifty dollars. [*Approved June 21, 1870.*]

[Chap. 41.]

RESOLVE making an Appropriation for Fish-Culture.

Resolved, That there be allowed and paid out of the treasury, a sum not exceeding four thousand dollars, to be expended under direction of the commissioners of inland fisheries, for purposes connected with the culture of useful fishes and of stocking the waters of the Commonwealth therewith. [*Approved May 12, 1870.*]

[C.]

[From the "Albion," August 14, 1869.]

FISH CULTURE IN NEW ENGLAND.

BY S. T. TISDALE, ESQ., OF EAST WAREHAM, MASS.

The recent appointment of Fish Commissioners, and the interest manifested in the Fisheries of New England streams and lakes, especially those of Massachusetts, prompts me to give in detail the reasons which led me to introduce the black bass to the waters of our own State, with other incidents thereto belonging. I do this that proper record of them may be made for the benefit of all parties feeling any interest in the subject.

The trout streams of Barnstable and Plymouth counties have long been celebrated, and until the age of railroads, and the expansion of manufacturing interests, presented commanding pleasure and interest to every lover of the piscatorial sport. These two enterprises, opening wide the door of transit to and from the streams, and increasing the family of anglers, have for many years led to their depletion to such an extent that it no longer repays the effort to resort to them. This was the case twenty years since, and now it is rare to catch trout of any value except in some choice preserve. This depletion of the trout streams led me to consider the subject of stocking the lakes and ponds of this vicinity with some game fish as a substitute. With the aid of a veteran angler and friend, now no more, I decided upon an effort to introduce the celebrated black bass of the northern lakes. I allude to Preston Hodges, then verging upon seventy years. He proposed to undertake and accomplish the effort at my expense. This was the result of a conference at my house one evening in May, 1850, after an unsuccessful *raid* for trout near Agawam. Saratoga Lake was selected as the best location to obtain bass. In June he was upon the spot, where he remained some two weeks, and, aided by a henchman, captured some forty fish, thirty of which were kept alive. With these, seeking the most expeditious means of transit by rail, he started for Agawam, *via* Boston. They were placed in a large cask of water,

properly cooled with ice, and reached Springfield only to die! This was in June. Undaunted he retraced his steps, and was soon at the lake, and, with his trusted henchman, again catching a fresh supply of fish. The mortuary result of the Springfield route led him to discard its second attempt. By the first of July he was once more ready to start for Agawam with twenty-eight live fish. These were divided, and placed in two boxes, four feet long and some fifteen inches square. He came to Troy, and started for New York by steamboat down the Hudson River, making a night passage, and reaching New York in the morning at eight o'clock. During the night himself and henchman were constantly watching, watering and icing the fish—they began to droop, and their loss seemed inevitable. They were carried to the Fall River steamboat, apparently gasping their last! A change of water, from a Croton tank, well iced, restored them, only one dying. This change and cooling was kept up during the day and through Long Island Sound until they reached Fall River, and from there, *via* railroad, to Agawam, two large casks of Croton water having been brought the entire distance for this purpose. For two days they were watched, watered, and cooled, without a moment's intermission; and on the arrival of the cars at Agawam, at 11 o'clock, A. M., the 4th day of July, anno Domini 1850, twenty-seven live black bass from Saratoga Lake were placed in Flax Pond, adjoining my residence, thus stocking it forever! This, I believe, is the pond *first* stocked in this State, if not in New England, Vermont probably excepted. Nor could I rest here. The foundation had been laid at Saratoga Lake for a further supply at a later season of the year. Of this I availed myself in November, and through a person employed there I had one hundred more live fish brought over the same route to Agawam, and distributed in several ponds of larger size within Plymouth Woods; among them, White Island Pond, which is seven miles in circumference; Great Sandy Pond, a mile long; Great Herring Pond, Pickled Pond, Agawam Mill Pond, and Sturtevant's Pond. This was repeated in 1851 and 1852, and from these and their progeny more than thirty ponds in this region have been stocked through my own instrumentality, while a similar number have been stocked by other gentlemen of Plymouth, devoted to angling. The waters of Massachusetts are destined to teem with this superior fish, the first planting of which was in the beautiful Flax Pond. The creation of Fish Commissioners by the State opens the first leaf of a new and enlarged volume devoted to ichthyology. It will lead to the study and natural and artificial propagation and culture of every desirable fish, and stimulate the

production of an important element of food. I will now give some account of the growth and habits of this fish, derived from twenty years' experience and observation. After stocking a pond no fishing should be permitted for five or six years. This gives ample time for a large increase, after which the observing angler may class them as to size with some accuracy. In waters adapted to their growth they will increase as rapidly as perch. In six years after being spawned, they will reach three pounds, and gradually increase to the maximum size, which may be set at five to six pounds, at the rate of about half a pound per year. Very many fish from two to three and a half pounds, have been taken from the ponds stocked in 1850 to 1852, and but few, comparatively, of five to six pounds. One of seven and a half pounds was taken late in May, 1864, which I had placed in a new pond, two years previous, then weighing three and a half pounds; but it was a female fish, from which I took a *sack of spawn weighing two pounds*. Another of equal length taken from another pond in June, after it had spawned, weighed five and three-quarters pounds. This would indicate a growth of one pound per year after reaching three and a half pounds, food being abundant. I cite these as facts, with some doubt as to their general application. The absence of more large fish may result from free fishing, and the greediness of the larger growth of fish to take the angler's tempting bait. It is noteworthy that the largest fish yet taken appear to be those which were transplanted. They spawn in May, and appear to occupy their spawning beds for nearly two months, being found thereon late in April, disappearing in June. Large, clean places are scooped out in four to eight feet depth of water, verging on the shore of the pond, and some four to ten feet diameter. These beds are made on sandy or gravelly bottom, are distinctly visible with fish thereon, from a boat as it passes over or near them. The trunk of a sunken tree, a shelving rock, or beside a lone rock, or bed of rocks, or other hiding place, is a favorite location for a spawning bed. They lie in one or more couples over their beds, and here for the period of incubation they keep watch and ward with constant fidelity. Around their beds may be seen perch, suckers, eels and catfish in plenty, ready to devour a portion of the ova. The bass are constantly at war with these voracious depredators, driving them off from moment to moment "under the current of a heady fight." Young bass are not seen in large numbers like the herring and some other fresh-water fish swimming near the surface a prey to their enemies.

In embryo life they seem to come in a moment! From close ob-

servation in a small pond where I placed several fish in April and May, and where I could daily watch their movements, beds were made by several pairs, over which the female hovered continually. Here they remained until the 24th of June. Every hour I watched them without any evidence of young fry. In the afternoon of this day, after an hour's absence, I returned and discovered several hundreds of minute young bass hovering at the surface of the water, while the parent fish was moving around her bed as usual. These young fish were darting about with activity—about $\frac{3}{4}$ ths of an inch long, looking like black motes in the water. For three or four days they kept in this position, and then scattered about the edge of the pond among the grass, a few being thus seen for some two or three weeks, when all sight of them was lost till September, at which time a few only were discovered of about two inches in length, with the tail marked with a cross-bar.

The above refers to the *first* show of life from one bed. On the 28th of June two other beds in the same manner developed their young. Most of these died or were devoured by the old fish. The precise time these fish spawn, or the duration of their spawning season, I have not yet fully discovered. I incline to the opinion that a period of two to four weeks passes before all their ova are deposited, and that they are hidden by them in the sand, in or around their beds, receiving impregnation from time to time from the male fish. The act of emitting their spawn I have never seen; and repeated efforts to express it from these fish in May, when supposed to be ripe, for the purpose of artificial impregnation, proved abortive. The ova of this fish are small, about one-fourth the size of salmon or trout spawn, very compactly laid in a film-covered sac, and apparently difficult to escape through any artificial process. Further experiments beyond doubt will effect this. One fish is generally on guard at the bed, seemingly quite docile, and if alarmed, moves from it a few feet, but soon returns. This probably is the female exercising her maternal care of the young. The young fish begin to be visible in June and July close in shore among the gravel, pebbles, or grass, darting with some activity, and near the surface, for the double purpose of food and protection. They are marked with a small black stripe across the tail, distinctly visible through their first summer; after the first year this disappears, and they assume the general character of this fish, varying according to season, water and food. They are about an inch long when they first disport themselves, and reach about three inches in five months.

They are caught by trolling with an artificial bait in imitation of

a fish like a minnow, or a fly, the murderous spoon, or a strip of perch or pickerel, or any other fish, with line extended 25 to 200 feet—or, by still fishing from a boat, with minnow, worm, or other bait, and from the shore with a rod-line at long cast. When hooked they plunge deep, and then come with velocity to the surface, breaching some two to four feet out of water, repeating this several times with a shaking motion, as if to shake the hook from their mouth. Their capture affords unequalled attraction to the angler. Often two will strike at once, if bait and fly, with long leader, are used. They are hardy, tenacious of life, and will live a long time out of water. They can be transported in a barrel half-filled with water in cool weather, 50 miles by rail, by once changing the water, say twenty of medium size, with entire safety; and in warm weather ice must be used to *cool*, not *chill*, the water (say to a temperature of 55 to 60 degrees). In this manner they can be carried to England with proper care, especially the smaller fish. They do not feed much at large in winter, as it is rare to catch them through the ice, and the belief is that they will not bite at this season, as a general rule. Indeed this is the result of present experiments, as those wintered in a small artificial pond recently, show that they go into winter-quarters by December, where they select some lone deep place, near or under the shelter of rocks or roots, and remain in a torpid state till spring, emerging to all appearance in fine, active, vigorous condition. They feed much on flies in summer, and the calm surface of the lake is often agitated with their breaking for this purpose. They range wide in quest of food, often driving small fish ashore. In August, September and October, they are in the best condition for the table, and a baked black bass of four to five pounds, in September, with every appropriate condiment, is a rich dish, which all who taste will fully appreciate.

[D.]

SUPREME JUDICIAL COURT.

SUFFOLK COUNTY.

THEODORE LYMAN AND OTHERS, *Commissioners of Inland Fisheries, on behalf of the Commonwealth of Massachusetts*, vs. THE HOLYOKE WATER POWER COMPANY.

REPORT.

The above entitled case was heard before me, upon the bill, answer, replication and proofs. The facts set up in said bill and answer were, for the purposes and issues of the case, admitted by the parties to be true, except as to the allegations:

1st. That salmon had been driven from the Connecticut River by the defendants' dam—as to which it was agreed that the statements of the answer are substantially true; and,

2d. The parties were at issue upon the question, whether the defendants' dam had caused a decrease of shad below it in this State.

It was admitted by the defendants, as stated in their answer, that there has been a decreasing quantity of shad in said river for the last fifty years, and that such decrease had been continued in said State since the building of the dam of the defendants, and had amounted for the last 25 years, to 25 per cent. or more.

The plaintiffs claimed that such decrease was caused by the said dam, which the defendants denied.

Witnesses were called who testified as to their knowledge of the river and its fisheries, and some of them gave their opinion as experts, without objection by either party. It appeared that the breeding ground, between said dam and Turner's Falls, was cut off by the building of the defendants' dam, but it was also shown that the fishing ground was cut off to the same extent—the fisheries so destroyed being those paid for, as alleged by the defendants in their answer.

It was proved that the facilities for taking fish from the river below the defendants' dam, by an enlarged number of fisheries, and of nets of all kinds, along the river and at its mouth, and of fish-pounds at the mouth of the river and in the Sound, had been greatly increased since the building of the defendants' dam, and that by these means, and by the more vigorous prosecution of the business of taking the fish in all these ways, below the dam in Massachusetts

and in Connecticut, and at the mouth of the river, extending into the Sound, the passing of the fish up said river is much more seriously impeded now than at the time said dam was built, and that a smaller proportion of the fish entering said stream, or coming near the mouth of it for the purpose of entering, succeed in getting as far north as the south line of said State, now than at that time. That the increase of manufacturing on the banks of the river and its tributaries, has, to some extent, polluted the water; that by the clearing of the woods towards the head-waters of said river and by the drainage of swamps and the sewerage of large towns, the annual and other freshets in said river have been increased in volume and in the turbidness of the water, and shortened in their duration.

The defendants claimed that the supply of fish below their dam in Massachusetts, would be diminished by all these causes, and upon the evidence before me, I was of opinion that they were so diminished. Upon the question whether the fisheries below the dam were materially damaged by its maintenance, the evidence was seriously conflicting. It did not appear that any owners of such fisheries had ever claimed that they were so damaged. The only practical fishermen who were called, were owners of fisheries below the dam, a little south of the State line, familiar with the river fisheries for many years, one of them having been familiar with the river from said dam to its mouth, for thirty years or more; they both testified that, in their judgment, such fisheries below said dam were not so injured.

Mr. Lyman, the chairman of said commissioners, was the only witness examined for the plaintiffs. He testified as to the habits and instincts of shad, and among other things, that those spawned in the breeding grounds above said dam would return to those breeding grounds to deposit their spawn; that when shut out from those grounds they would, after a time, disappear from the river, and that such source of supply would thereby be cut off; and the fish below the dam would be decreased in number, and the fisheries thereby diminished in value; and that, in his opinion, a proportion of the decrease in number of fish below the dam since its erection was due to this cause.

Upon the evidence given by him, I find that a small but appreciable proportion of such decrease was due to the maintenance of said dam. Upon the evidence before me I am not able to estimate the proportion.

Upon the testimony of Mr. Lyman, I find that the fishway which said commissioners now require the defendants to build and maintain, would not diminish the water-power of the defendant company,

except when they may desire to add to the permanent height of their dam by flash-boards.

All questions of law raised by the bill, answer and report, as to the constitutionality and validity of the legislation upon which the plaintiffs' case rests, are reserved for the consideration of the full court.

The bill, answer and this report to be printed, and either party to be at liberty on the hearing to refer to the legislation which is set forth as referred to therein.

JAMES D. COLT, *J. S. J. C.*

BILL OF COMPLAINTS.

To the Honorable the Justices of the Supreme Judicial Court, within and for the County of Suffolk and Commonwealth of Massachusetts.

Humbly complaining, show unto your honors your orators, Theodore Lyman, of Brookline, in the county of Norfolk, Alfred R. Field, of Greenfield, in the county of Franklin, and Edward A. Brackett, of Winchester, in the county of Middlesex (who bring this bill in their name as Commissioners on Inland Fisheries, but in behalf of the Commonwealth of Massachusetts), that by virtue of and under the provisions of an act of the legislature of said Commonwealth, passed in the year of our Lord one thousand eight hundred and sixty-six, entitled "An Act concerning the obstructions to the passage of fish in the Connecticut and Merrimack Rivers," (and subsequent acts upon the same subject-matter,) the governor of said Commonwealth, by and with the advice of the council of said Commonwealth, appointed said Theodore Lyman and Alfred R. Field, the twenty-ninth day of June, A. D. 1866, and said Edward A. Brackett, the seventh day of July, A. D. 1869, Commissioners on Inland Fisheries for the term of five years from and after the date of their appointments.

And your orators duly accepted said office of commissioners to which they had been appointed as aforesaid; and ever since said appointment they have and now hold said office. And your orators in pursuance of the duties and obligations required of them under said act, by virtue whereof they were appointed, proceeded to examine the several dams on said rivers in the Commonwealth, and after due notice given to the owners and proprietors of said dams, as required by section second of said act, did determine and define the mode and plan upon which fishways should be constructed, suitable and sufficient, in the opinion of your orators, to secure the free passage of salmon and shad up said rivers during their accustomed seasons.

And your orators further show, that the State of New Hampshire, by an act of its legislature, passed in the year of our Lord one thousand eight hundred and sixty-five, authorized the appointment of commissioners of fisheries in said rivers, and authorized said commissioners to act in reference to said fisheries, and the construction of fishways to secure the passage of salmon and shad up said rivers in said State of New Hampshire. And under said act of the State of New Hampshire, commissioners were appointed with authority to act as aforesaid, and accepted said appointment; and your orators submitted a full and specific statement and description, and plan of the fishway so determined as aforesaid, to said commissioners of the State of New Hampshire, which said commissioners approved the plan of said fishway so submitted by your orators. And your orators further show, that the Holyoke Water Power Company, a corporation duly established by laws of this Commonwealth, are the owners and proprietors of a certain dam, constructed upon and across the Connecticut River, at Holyoke, in the county of Hampden and Commonwealth aforesaid; and prior to the erection and maintenance of said dam, fish, both salmon and shad, were accustomed to pass up said river in great numbers to their spawning beds above said dam; and such fish in said river were a source of great value to the Commonwealth, furnishing large amounts of food to the inhabitants thereof, and were a source of great value and income to the riparian proprietors of said river, both above and below said dam; but the erection of said dam has proved an effectual bar to the passage of all fish, especially shad and salmon, up said river to their accustomed spawning beds at all seasons of the year, and has prevented said fish from passing up said river at their accustomed seasons, and has effectually destroyed all fish rights, both above and below said dam, and has effectually prevented the passage of said fish up said river as aforesaid.

And your orators further show, that in pursuance of their duties as such commissioners, after due notice to said Holyoke Water Power Company, they examined the dam of said corporation and determined the mode and plan upon which a fishway should be constructed, suitable and sufficient in their opinion to secure the free passage of salmon and shad up said river and over said dam during their accustomed seasons, and furnished a plan and specifications for such fishway to said corporation, and filed a copy thereof in the office of the secretary of the Commonwealth of Massachusetts, with an affidavit of the fact that such plan and specifications had been furnished to said corporation.

And your orators further show, that said plan and specifications

were furnished by your orators to said corporation on February tenth, A. D. 1870, and said corporation were requested and required to build and complete said fishway in accordance with such plan and specifications: a copy thereof is hereto annexed marked "A." And your orators hoped that the said corporation would have constructed said fishway and have agreed with your orators for building the same, as by law they should do. But now so it is, may it please your honors, that the said corporation utterly refuses to construct said fishway, or to agree with your orators for the construction of the same, and have so refused for more than thirty days since your orators have furnished to them a plan and specifications for building said fishway; said corporation pretending that they are not by law required to construct such fishway, or to agree with your orators for the construction of the same, and that the Commonwealth of Massachusetts have no power or right to command or require them to build such fishway. Whereas your orators charge the contrary of all such pretence to be true, as they say said corporation is by law required to build such fishway according to said plan and specifications furnished as aforesaid; but nevertheless, the said Holyoke Water Power Company under such and other like pretences utterly refuse to build and construct such fishway, and refuse to agree with your orators for the construction of the same.

To the end therefore that said corporation may by its officers true answer make to all and singular the matters herein before stated and charged as fully and particularly as if the same were hereinafter repeated and they thereto directly interrogated, and more especially, that they may answer whether your orators after due notice determined and made a plan for a fishway over the dam of said Holyoke Water Power Company, for the free passage of salmon and shad as before stated, and whether said company are the proprietors of said dam; and whether said company have been furnished with a plan and specifications of said fishway; and whether for more than thirty days after such plan and specifications were furnished, they have refused to construct said fishway, or to agree with your orators for the construction of the same. But your orators expressly waive any answers to the matters and things herein complained of and set forth on oath.

And to the end that said corporation may be compelled by decree of this honorable court specifically to build and construct said fishway according to said plan and specifications; and that your orators in behalf of the Commonwealth of Massachusetts may have such further and other relief in the premises as to your honors may seem meet and the case require.

And may it please your honors to grant unto your orators your writ of subpœna, to be directed to the said Holyoke Water Power Company, thereby commanding said corporation at a certain day and under a certain pain and penalties therein to be specified, to be and appear before your honors, and then and there to answer all and singular the premises, and to stand to, perform and abide such order and decree therein as to your honors shall seem meet; and your orators shall ever pray.

THEODORE LYMAN.
E. A. BRACKETT.

JOS. F. CLARK, *of Counsel for Complainants.*

SUFFOLK, ss. March 14th, 1870. Then personally appeared the aforesaid Theodore Lyman and E. A. Brackett, and made oath that all the allegations of the aforesaid bill of complaint within their knowledge are true, as that all other allegations therein are true, according to their best information and belief.

Before me,

JOS. F. CLARK, *Justice of the Peace.*

Filed March 14, 1870.

ANSWER.

The said defendants come and for answer to the bill filed by the plaintiffs, say:

They admit that the plaintiffs were duly appointed, as they allege; and that by proper legislation they were authorized to bring this suit; and that they have examined the dam in Massachusetts, as they allege.

They also admit the allegations of the bill, in reference to the doings of the State of New Hampshire, and of the commissioners appointed by that State, and that a plan of fishway was submitted to said last named commissioners, and approved by them, as is alleged.

They also admit their own existence as a corporation, and their ownership of a dam across the Connecticut River, at Holyoke, substantially as is alleged.

They also admit that, before the erection of their said dam, shad were accustomed to pass up said river as far as the Montague dam, at Turner's Falls, and that said fish were of some value to citizens of said State, who were private owners of riparian fish rights for sale as food; and that they were, to some extent, a source of income to such riparian proprietors upon said river, both above and below said dam, but they say that salmon had ceased to be found in said stream for many years before the building of said dam.

They also admit that their dam has prevented fish from going

above or in said river, and that it has destroyed fish rights between said dam and the said Montague dam; but they deny that it has destroyed or materially injured or damaged fish rights or owners of such rights below the dam of defendants.

For the purposes of this case, they admit that the plaintiffs have determined a mode and plan of a fishway over said dam, sufficient in their opinion to secure the free passage of salmon and shad, as they allege, and that they furnished a plan and specification to the defendants, and filed a copy thereof, as they allege; and also that a plan and specification were furnished to the defendants on _____, and that they were requested and required to build and complete said fishway in accordance therewith, and that they refused for more than thirty days, and now refuse to build, at their own expense, said fishway, or to agree with the plaintiffs so to build it; and that they have claimed, and do now claim, that they are not by law obliged to build the same as aforesaid, and that the Commonwealth of Massachusetts has no right to require them so to build said fishway.

The defendants allege in excuse and justification of such refusal and claim, that the "Hadley Falls Company" was duly incorporated by the legislature of Massachusetts, by an Act passed April 28, A.D. 1848. That in and by said act, constituting the charter of said Hadley Falls Company, the said company was authorized and empowered to build and maintain a dam across the said Connecticut River, as the same was built by said company, and is now maintained by these defendants, upon condition, however (also set forth in said charter), that said Hadley Falls Company should pay to the owners of fishing rights existing at that time, above said dam, such damages as should be awarded by the county commissioners of the counties in which said rights existed.

That said Hadley Falls Company accepted said charter, and were duly organized under and according to its provisions, and duly paid all damages to owners of fishing rights above their dam, as in and by said charter is required.

That said Hadley Falls Company expended (including damages to owners of such fish rights) over two millions of dollars, and then failed.

That by an Act of said legislature, passed in the year 1859, the defendant corporation was chartered, for the purpose of "upholding and maintaining said dam and one or more locks and canals in connection therewith, and of creating and maintaining a water power to be used, sold or leased for manufacturing or mechanical purposes; and in and by said Act, the defendant company was authorized to

purchase, take, hold, receive, sell, lease and dispose of, all or any of the estates, real, personal or mixed, with all the water power, water-courses, water privileges, dams, canals, rights, easements and appurtenances thereto pertaining or belonging, or therewith connected, or which has at any time theretofore belonged unto, or been the property of said Hadley Falls Company."

That the defendant company duly accepted said charter, and was duly organized under and in pursuance of its provisions, and purchased under the authority above set forth, all property and rights of property of said Hadley Falls Company, and has upheld and maintained said dam and locks and canals, and has sold, leased and used the power created by said dam and property, for mechanical and manufacturing purposes, and became, by force of said legislation and of said purchase, the successors and representatives of said Hadley Falls Company, and owners of all its property and rights.

That there are now more than twenty different corporations dependent upon said water power to carry on their business, which is very large, involving ninety-six thousand cotton spindles, twenty-four sets of woollen machinery, one hundred and seventeen paper engines of large size, besides a very extensive machine shop and other machinery, requiring and controlling several millions of dollars of capital, and gathering to it, and furnishing business for a growing town, which has now a population of about twelve thousand persons.

That it is admitted by the plaintiffs, in their report to the said Commonwealth for the year 1866, at page eleven, that the fishway sought for "must use a certain amount of water power," and that "this would be so much subtracted from the power of the company on whose dam it should be placed;" and on page fifty-one of same report, that such "fishway would injure or inconvenience the manufacturer, more or less seriously," both of which statements, the defendants say are true.

That in their very numerous and important contracts of sale and lease of water power, the defendants have sold and contracted with reference to the present height of their dam, and the power created thereby, and the canals of the company, and the wheels and machinery of the numerous companies dependent upon said dam and the power created thereby, are set to such level as is called for, and will be secured by the continuance of said dam and power in all respects as it now is.

That the defendants have guaranteed said mill powers, so to be continued, for long terms, amounting to a substantial perpetuity; and that said defendants are now expending a sum equal to nearly

or quite their original capital, to secure the maintenance of said dam; that its stockholders are numerous; have purchased said stock in reliance upon the terms and stipulations set forth and contained in said charters, and of the agreements of the State of Massachusetts, also set forth and contained therein.

That said corporation has been compelled to withhold dividends from its stockholders, and will be compelled to withhold them for a long time to come by reason of the great expense which they have incurred and are now incurring in the performance of the obligations which were involved in their acceptance of said charters.

And the defendants allege that all of these facts were well known to the plaintiffs, and were by them communicated to the said Commonwealth, to wit: in the reports of the said commissioners of the years 1866, at pages 11, 29 and 41, and of 1867, p. 3.

The defendants further allege, that the fish rights, both above and below said dam, were and are private property; that those above the dam were destroyed by the building of defendants' dam, and damages therefor were paid as herein before was alleged.

That no damages were contemplated or provided for by the legislature, on behalf of the owners of fish rights below said dam, nor have such owners ever, with the knowledge of these defendants, claimed that their rights were diminished in value by said dam; nor has any claim of damages been in any form made by such owners, on account of any damages by them sustained.

That if fish rights above the dam should be restored by such fishway as is prayed for by plaintiff's bill, it would be at a cost of about thirty thousand dollars, and they would be the private property of those who have heretofore been paid damages for their destruction, as is above alleged.

The said defendants admit that shad have been diminishing in number in said river for a long time past, to wit, for fifty years and more, and that such diminishment has continued since the building of their said dam, but they say that such diminishment is due to other causes than said dam, to wit, to dams at or near the mouth of tributaries of said river, to the water wheels and other machinery, and canals below said dam of the defendants at Chicopee, and at Windsor Locks, by which a large proportion of the fish passing down the river are killed, to the clearing up of forests, and the drainage of land in the meadows and swamps, and by the sewerage of large towns, and to other causes, the same and similar to those which had driven the salmon out of said river before the building of defendants' dam, and for which these defendants are not responsible.

And the defendants say that by reason of the facts herein before

stated, and especially because they and the said Hadley Falls Company (which last named company, the defendants in all respects, as to property, rights, powers and privileges, represent), have performed on their part, in all things, the conditions and requirements of the contract set forth and contained in said charters; the legislation of said State referred to and relied upon by the plaintiffs, in so far as it requires or authorizes the plaintiffs to require the defendants to build a fishway over their said dam, at the expense of said defendants, is as to them, unconstitutional, invalid and void; and further say that the plaintiffs are without equity, and that the relief prayed for by them is against equity; and defendants pray that they may be hence dismissed with their costs.

HOLYOKE WATER POWER COMPANY,

By F. CHAMBERLIN, *Attorney.*

Filed March 14, 1870.

Issue joined March 14, 1870.

Copy.

Attest:

, *Clerk.*

SUPREME JUDICIAL COURT.

SUFFOLK COUNTY.

THEODORE LYMAN AND OTHERS, *Commissioners of Inland Fisheries on behalf of the Commonwealth of Massachusetts*, vs. THE HOLYOKE WATER POWER COMPANY.

BRIEF OF DEFENDANT.

I. What are the preliminary facts?

The case made by the bill, answer and report, finds that the "Hadley Falls Company" was empowered by its charter, duly granted by the legislature in 1848, to build and maintain a dam across the Connecticut River, as the same was built by that company and is now maintained by these defendants, "upon condition that said company should pay to the owners of fishing rights existing" (at that time) "above said dam such damages as should be awarded by the county commissioners of the counties in which such rights existed."

That said company accepted said charter; was duly organized under its provisions, built the dam authorized by the Act, and duly paid all damages to owners of fishing rights above it as required by their charter.

That said company expended (including damages to owners of fishing rights) over two millions of dollars in carrying out the

purposes for which they were chartered, and failed; and that in 1859 the defendant company was duly chartered, organized, and became by special authorization of said legislature and by contract with said Hadley Falls Company, owners of said dam and the water power created thereby, and of all property, rights, powers, &c., which had belonged to said Hadley Falls Company.

That the defendant company was authorized to uphold and maintain said dam, and to purchase, hold, lease, or sell, all the property, rights, &c., of said Hadley Falls Company, and that they have so purchased, held, &c., and are now in all respects, by force of said legislation and purchase, the successors and representatives of said Hadley Falls Company, and owners of all its property and rights.

That the plaintiffs are Commissioners of Inland Fisheries, duly clothed with all the powers vested in them by the legislation to which they refer in their bill; that they have required the defendant company, at its own expense, to build a fishway over its dam, and that the defendants have so refused to comply with such requirement, that unless they are exempt from obligation so to build such fishway on account of the matters set up in their answer, decree should be entered against them.

II What is the legislation relied upon by the plaintiffs?

The legislation to which they refer is the Act of the year 1866, entitled "An Act concerning the obstructions to the passage of fish in the Connecticut and Merrimack Rivers," and subsequent Acts upon the same subject-matter.

This legislation, under the fostering care of the plaintiffs has been extraordinarily progressive.

The first Act referred to (1866) is carefully prepared, and duly authorizes the commissioners to examine the several dams on the rivers of the State, and after notice to the owners of the dams, to determine and define the mode and plan upon which suitable and sufficient fishways should be constructed. (Ch. 238, sec. 2, of laws of 1866.) The third section of that Act requires them to submit a statement of their plans and methods to the commissioners of New Hampshire for their approval.

The fourth section requires them to furnish a copy of the plan adopted, after the same shall have been approved by the commissioners of New Hampshire, to the dam owner, and file copies in the office of the secretary of the State, with an affidavit that it has been furnished to the proprietor.

The fifth section provides that, where the owners of dams consent to build, the commissioners may contract with them.

The sixth section authorizes the commissioners to prescribe in writing the times when they shall be kept open and unobstructed.

The seventh section provides that if any proprietor shall refuse or neglect to agree with the commissioners to build, &c., for thirty days after plan is duly furnished him, the commissioners may construct the fishway at *his* expense.

The eighth section provides, that whenever in the construction of any fishway, the property of any person not liable by law to provide a fishway around his dam, shall be taken for the purpose of a fishway, the commissioners shall assess compensation to such person and give him a right of appeal.

The eight remaining sections of that Act are not important in this connection.

In 1867, by chapter 344 of public Acts, the powers of the commissioners were somewhat enlarged. By the first section of that Act, they are authorized to examine all dams and give notice to proprietors of defects in fishways and to prescribe in writing what repairs may be necessary and what changes, if any, should be made for improving said fishways; and by the second section proprietors of dams are exposed to a penalty of fifty dollars a day if they shall fail to keep open or maintain fishways, &c.

In 1869, by chapter 384 of public Acts, the powers of the commissioners are so enlarged that they quite closely resemble the *paternal* authority exercised by an absolute monarch in the earlier centuries. The first section of that Act gives name to the laws as to fish culture, &c

The second, gives name to the commissioners and provides that they shall be three in number, and be appointed by the governor and council, and hold office for five years.

The third section provides that "each may personally or by *deputy* enforce all laws regulating inland fisheries, &c."

The fourth is so important that I quote it entire—it provides that "whenever *either* of said commissioners find that there is *no fishway or an insufficient fishway* in or around a dam where the law requires a fishway to be kept and maintained, *he* may at *his* discretion enter with workmen and materials upon the premises of the person or corporation required to maintain said fishway, or cause one to be constructed where none exists, at the expense of said person or corporation, and may take if necessary the land of any other person or corporation, not obliged by law to maintain said fishway, provided compensation shall be rendered to the

owner thereof, in the manner provided in relation to land taken for highways, *and said expense shall be a charge against said person or corporation required by law to construct and maintain such fishway, to be recovered in an action of contract in the name of the Commonwealth, with cost and interest at the rate of twelve per cent.; provided that when a fishway has been constructed in accordance with the provisions of this section, said commissioners shall not require the alteration of the same by the owner of the dam, within five years of the completion of the same.*"

As this gives absolute power to *each* commissioner, controlled only by *his* discretion, it is difficult to see how it could be enlarged, unless by omitting the proviso, so that a new and improved fishway might be required *every* year, if the commissioners should be so fortunate as to devise a real or fancied improvement.

It will be readily seen that the case of the plaintiffs resting upon this legislation is one which *may involve the entire property of a water power company like the defendants*, if it is constitutional in itself, and if the company is without such chartered franchises or contracts as exempt it from this *absolute* and unlimited control.

Effective provision for the passage of fish up and down the dam of these defendants—thirty feet high—about one thousand feet long—and water varying from no depth at all on the crest of the dam, to twelve feet of water, is a difficult and expensive matter.

The mode and manner in which it can be done, has not been so determined that it is at present beyond a theory; and before it is accomplished *to the satisfaction of all three* of these commissioners, it may be necessary to build a fishway extending the whole length of the dam or to construct a canal on an inclined plane *around* the dam, of such length as to render the flow of water in it comparatively moderate.

III. The defendants do not question the law as stated by this Court in *Vinton vs. Wild* (9 Pick. 87) that "owners of dams hold their rights, to maintain them, subject to such regulations as the *legislature* shall from time to time prescribe for the preservation of fish, &c." But if necessary for the purposes of their case, they would question the right of the legislature to *delegate* this power, "from time to time to regulate, &c.," so absolutely as to put such regulations entirely within the discretion of any *one* of a board of commissioners appointed by the governor and council, from term to term of five years' duration.

Upon such position the defendants believe they might successfully resist the enforcement of that legislation, but fortunately they

are not compelled to rest upon this point and have no occasion to press it beyond this mere suggestion.

IV. The defendants claim that the case made by the bill, answer and report is, in all its essential features, like that of *Commonwealth vs. The Essex Company* (13 Gray. 239).

See provisions for damages in the two charters. H. F. Co.'s charter, sections 4 and 5, and recital of Essex Co.'s charter, 13 Gray, 244.

In comparing the two cases it will be unnecessary to consider the liability of the Essex Company to build a fishway, under their original charter, as it is quite evident by reference to the case, that that had no legitimate bearing upon the result.

The Court upon page 250, 13 Gray, decline to express an opinion upon the question whether the legislature could have required that company to have built other fishways: "If it could be shown that effectual ones could have been provided *at a reasonable cost*," for reasons which appear *in their construction of the additional Act*.

At the time the additional Act was passed in favor of the Essex Company, their dam had been in operation some time with the fishway prescribed, which had proved to be unsuitable or insufficient to accomplish the purpose of providing for the passage of the fish. (13 Gray 250, 251.)

The company then needed and asked for legislative aid to enable them to increase their capital stock.

They were in precisely the same position in all material respects as the Hadley Falls Company, when it needed and asked for a charter.

The one company was asking for a charter, and the other for increased power under a charter already granted. In both cases the legislature had the power to regulate and adjust all conflicting rights, whether public or private, connected with, or which would grow out of the granting of the franchise, and they exercised it in both instances in precisely the same manner.

In the one case the increase of capital was granted, substituting "for the public right intended to be provided for by the fishway, a provision for the payment of damages by the company *to every riparian owner of fishing rights* along the river *above the dam*, giving them a remedy against the company where none existed before," &c. (13 Gray, 251); and in the other the original grant of the charter was made with precisely the same arrangement and provision.

In both cases the charter, and the increased capital, were ac-

cepted and the conditions imposed by the legislature were performed by the grantees of the franchises.

The indemnity in both cases was equally broad, being a provision for the payment of damages by the company to every riparian proprietor *above the dam*, and in both cases a large amount was paid as such damages, and all parties provided for by the legislature, were paid.

If it be said that in this case it appears that the fish were somewhat diminished below the dam, the answer is, that for various and quite obvious reasons that cannot properly distinguish this case from the other or vary the result.

(a.) The same fact *existed* in the Essex Company's case, although not specifically found—perhaps for the reason that it was there as here quite immaterial.

(b.) The same thing necessarily exists where a fishway in its *best* conditions takes the place of the broad stream. The passage is *somewhat impeded*, as is suggested by the late chief justice. (13 Gray, p. 249.)

(c.) A slight but appreciable diminution is all that is found here, and that upon evidence which was "very conflicting," and the finding was based upon the testimony of one of the commissioners; against the testimony of practical men eminently intelligent upon the subject, and against the fact that no riparian proprietor below the dam was ever known to make such claim.

(d.) If there was practical damage which could be estimated, the parties who sustain it are the only ones who can avail themselves of that fact, and the proper remedy for them, if they can be convinced that they are damaged and ask relief, is to give them right to prove their damages in some proper manner, as those above the dam were permitted to do, and secure compensation, and not compel these defendants to lose the benefit of the large damages they have paid to those above the dam whose fisheries were destroyed, and restore to those parties at great expense that for which they have been paid.

(e.) Neither of these classes had valid claims for damages except as the legislature should and did provide. (13 Gray, 249.) The power to regulate the public right and to provide remedy for such private parties as in the judgment of the legislature would be seriously and practically damaged, was entirely with the legislature and they have exercised it. The considerations suggested by the Court in the Essex Company's case at page 251 seem quite conclusive.

(f.) In addition to the *public* benefits expected from the building

up of a large manufacturing town, the legislature may have believed that private riparian owners below the dam would be quite as much benefited by the increased markets which they would find for such fish and other products as they would have, as they would be possibly damaged by the diminished number of fish.

Finally, this whole matter rested in the discretion of the legislature, *and they have exercised it.*

The proposition *to take from these defendants* the valuable right which they acquired by the payment of damages to private owners above the dam, and restore to such owners that for which they have been fully paid, is quite as extreme a case as that put by this Court in 13 Gray, 253, as an illustration of improper and unconstitutional legislation.

V. This case differs—favorably for the defendants—from the Essex case in one particular.

In that case the legislature had provided by direct enactment that the Essex Company should build a fishway, &c., or forfeit the penalty named. It was clear that the discretion and judgment of the legislature had been brought to bear upon the question, whether under all the circumstances of the case that company ought to be compelled to build.

Here there is no direct legislation pointing to these defendants, and while the general language of the statutes is broad enough to include them, it is at least doubtful whether the legislature in either of the statutes authorizing the plaintiffs to compel the building of fishways, designed to have them require *the defendant company* to build *such fishway at their own expense.*

The only statute (ch. 238 of 1866) which is clearly broad enough to embrace this company, contains provisions (see section 8) authorizing the fish commissioners to award damages to any person whose property is taken to build a fishway, where such person is not by law liable to build one.

That the *legislature* did not *intend* to compel the defendant to build at its own expense, is rendered probable by the documents which the plaintiff put into the case on the hearing.

In an opinion of Mr. Loring dated Oct. 16th, 1865, addressed to the fish commissioners and appended to Senate document No. 8 of 1866, referred to generally at the hearing, on pp. 50, 52, is the following statement :

“The charter of the Hadley Falls Company required them to pay the owners of fish rights existing above their dam, such damages as the county commissioners should award. I understand that

these damages have been paid to the claimants. I can discover no reason why the requirement of the legislature complied with by the corporation, should not exempt them from further liability to construct.

“I think it does, and that the Hadley Falls Company cannot be required to contribute to the construction of a fishway over or around their dam.” And, again on the same page, “the cost of constructing such fishways at Holyoke and at Lawrence must, I think, be paid by the State.” The fish commissioners themselves, in their report of 1866, at page 29, and of 1867, at page 3, express substantially the same opinion.

The Essex Company constructed at small cost a structure, which, though approved by the county commissioners, was really worthless, and the fisheries above the dam were ruined, but until the legislative provision was made, which grew out of the petition for increase of capital, the owners had no remedy. That company remained under the obligation to support and *maintain* that *worthless* fishway, till they compromised their liability by dividing with the State the expense of the fishway recently built by or under the direction of the plaintiffs.

This was probably a good arrangement for the Essex Company, and if the defendants were bound to *maintain any* structure for the purposes of a fishway, they would be glad to make a similar arrangement and be relieved of such a liability, but this company has done all that was required of it, and, as before stated, is completely within the authority of the case in 13 Gray.

VI. Aside from the case of the Essex Company in 13 Gray, the authorities are full, clear and numerous which sustain the proposition, that the legislation in question is, as against this defendant, unconstitutional.

In the case *Boston and Lowell Railroad Company vs. Salem and Lowell Railroad Company et al.*, 2 Gray, 34, this court states the principle thus: “When a contract has been made by the legislature, upon considerations of an equivalent public benefit, and where the grantees have advanced their money upon the faith of it, the State is bound by the plain principles of justice, faithfully to respect all grants and rights thus created and vested by contract.”

Reference is there made to the cases *Piscataqua Bridge vs. New Hampshire Bridge*, 7 N. H., 35; *Livingston vs. Van Ingen*, 9 Johns, 507; *Fletcher vs. Peck*, 6 Cranch, 135.

In the case *Central Bridge Corporation vs. City of Lowell*, 15 Gray, 106, 115, 116, this court held that a statute (St. 1843, ch. 50)

much less clear and direct in its terms and significant as a contract than the charter of the defendants, constituted an agreement and contract between the City of Lowell and the Central Bridge Corporation if accepted by them respectively.

See also *Old Colony Railroad vs. Plymouth*, 14 Gray, 155. *Abbott's Digest, Law of Corporations*, p. 159, secs. 133, 134; p. 160, secs. 135, 136; p. 161, sec. 142; p. 162, sec. 145; p. 165, sec. 166; p. 171, sec. 220; p. 172, secs. 223, 224, 225; p. 313, sec. 2. *M'Gee vs. Mathis*, 4 Wallace, 143; *Von Hoffman vs. City of Quincy*, *id.*, 535.

The cases in Connecticut :

Hartford Bridge Company vs. East Hartford, 16 Conn. 149; *East Hartford vs. Hartford Bridge Company*, 17 Conn. 79; *Enfield Toll Bridge Company vs. H. & N. H. R. R. Co.*, 17 Conn. 40; *Washington Bridge Company vs. State*, 18 Conn. 53, were ably argued and very fully considered by the highest court of that State, and have been several times referred to by this court with approval.

In the case cited from 16 Conn. R., where a charter of a bridge company was amended by imposing new burdens on the company which would supersede the necessity of a neighboring ferry, and directing that the ferry should be discontinued, was accepted and carried into effect, it was held that it constituted a contract, equally obligatory upon the State as the provisions of the original charter, and there being no sufficient power of appeal reserved, the legislature could not re-establish the ferry without the consent of the company.

The case was carried to the supreme court of the United States, and is reported in 10 Howard, 511. The head-note is as follows : "The legislature having ordered a ferry which came in competition with a toll bridge to be discontinued, in consideration that the proprietors of the bridge would incur certain expenses for the public benefit, and on the faith of such discontinuance, those expenses having been incurred, held, in conformity with the decision of the highest court of the State, that the legislature could not restore the ferry without violating the constitution of the State."

In the case cited from 17 Conn. it was held that, "a grant by the legislature in consideration of expenses to be incurred by the grantees, was in the nature of a contract, which could not be impaired, and that the court should give to its stipulations such construction as would carry them into full effect. (17 Ct. 54, 55, 57, 58.)

The case cited from the 18 Conn. was quite closely analogous to the one under discussion. The plaintiffs had a grant to build a

bridge over the Housatonic River in 1802, and by additional Acts in 1808, the grant was made exclusive for six miles on the river, provided that nothing contained in the grant should be construed to impair the rights of persons navigating the river.

The company built their bridge and kept it in repair according to the terms of their charter until 1845 when the legislature passed a resolve, *requiring them to construct a draw, &c.*, of a specified kind, and providing that the plaintiffs should be deprived of their power to take tolls as formerly until the draw should be completed and accepted. The plaintiffs failed to comply with the resolve. Quo warranto was brought, it was held that the resolve was not binding upon the bridge company.

VII. The plaintiffs ask this court, as a court of equity, to compel the defendant immediately to expend a sum of money large in amount (ranging as estimated by Mr. Chase from \$25,000 to \$30,000). This is sufficiently serious to a corporation already overweighted by the great expenditures which are at present resting upon it, in taking care of its dam and of the power which it was incorporated to create and preserve and dispose of, for the benefit, not simply of its stockholders, but (in many ways) of the State; but beyond this is a contingent liability, quite overshadowing this present outlay in importance.

The defendants believe this to be but the beginning of an experiment which is likely not only to involve a much larger outlay than that now talked of, and quite disproportionate to the expected benefit, but also a serious diminution of their water power.

The defendants (on page 7 of the answer) set forth "that in their very numerous and important contracts of sale and lease of water power they have sold and contracted with reference to the present height of their dam and the power created *thereby*, and the canals of the company and the wheels and machinery of the numerous companies dependent upon said dam and the power created thereby, are set to such level as is called for, and will be secured by the continuance of said dam and power in all respects as it now is."

"That *the defendants have guaranteed* said mill powers so to be continued for long terms, amounting to a substantial perpetuity, and that said defendants are now expending a sum equal to nearly or quite their original capital, to secure the maintenance of said dam; that its stockholders are numerous, having purchased said stock in reliance upon the terms and stipulations set forth and contained in said charters, and of the agreements of the State of Massachusetts also set forth therein."

We are aware that it is found by the report that “the fishway which the commissioners *now* require the defendants to build and maintain, would not diminish the water power of the defendants, except when they may desire to add to the permanent height of their dam by flash-boards.”

But if the plaintiffs are entitled to the relief for which they ask, it must be on the ground of the validity of the legislation upon which their powers in this particular and with reference to this company rest; and if that legislation refers to this company, and is to be construed as the plaintiffs’ claim—and as it must be to entitle them to the relief for which they pray—then, as we have already shown, *any one* of the plaintiffs may order a new fishway every five years, with reference solely to that which *he* thinks will most effectually restore fish to the head waters of the Connecticut, and without regard to the necessities of the defendant company, or of the numerous companies dependent upon them, and relying upon their contracts.

Such a final result (which the defendants believe to be not an improbable one if the plaintiffs have full power in the premises) will change the status of the defendants, and instead of the ownership of a valuable water power, which they are managing under their charter for the benefit of their stockholders, they will become proprietors of an extensive *fish*-pond, which they will *improve* under the direction of *each* of the fish commissioners, for the benefit of riparian proprietors, who have already been once paid for that which is to be restored to them; and there will result not only an impairing of the obligation of the particular contract contained in the charter of the defendants, but of all the contracts relating to water power which the defendant company, relying upon that contract, has made with their grantees and lessees.

WILLIAM GASTON,
F. CHAMBERLIN,

For Defendant.

SUPREME JUDICIAL COURT.

SUFFOLK, SS., JUNE, 1870.

THEODORE LYMAN AND OTHERS, *Commissioners on Inland Fisheries, on behalf of the Commonwealth of Massachusetts*, v. HOLYOKE WATER POWER COMPANY.

COMPLAINANTS' BRIEF.

I. (1.) Every owner of a dam within this Commonwealth holds it under the condition that a sufficient passage-way must be provided for migratory fish, over or around such dam; and this public right has always been subject to the regulation of the legislature. *Stoughton v. Baker*, 4 Mass. 522; *Commonwealth v. Chapin*, 5 Pick. 202; *Commonwealth v. Alger*, 7 Cush. 98; *Vinton v. Welsh*, 9 Pick. 87.

(2.) St. 1869, ch. 422, sect. 1, under which this suit is brought, is, therefore, within the authority of the legislature, and a proper means of regulating and enforcing the public right.

(3.) No owner of a dam can be exempted from his obligation to provide suitable fishways, except by express statute provision. *Commonwealth v. Essex Co.*, 13 Gray, 248.

(4.) There is no such express exemption in St. 1848, ch. 222, incorporating the defendant company.

(5.) But it is contended on the part of the defendants that the provision of their charter, allowing the riparian owners on the Connecticut River, above their dam, upon application to the county commissioners, to claim damages for injury to their fishing rights, exempted them from all obligations as to fishways.

(6.) This position is untenable:—

First. Because the language of the statute does not amount to an express exemption within the rule of Chief Justice Shaw in the case last cited, and, in the absence of such provision, the intention of the legislature, in compelling the defendants to pay damages, must have been to add an obligation supplementary to the public right already existing.

Second. Because the words of the statute, "damages to fishing rights," cannot be held to indicate that their total destruction was contemplated.

Third. Because, if there is any doubt upon the point in question, the words are to be taken most strongly against the defendants in this statute, since it is of the nature of a public grant. *Cleveland*

v. Norton, 6 Cush. 384; *Commonwealth v. Roxbury*, 9 Gray, 492; *City of Boston v. Richardson*, 13 Allen, 156.

The last case limiting the rule to doubtful cases like the present.

Fourth. Because it has been expressly decided by this Court, that an authority to erect a dam across a river, without any allusion to fishways, does not carry with it, by implication, the repeal of laws requiring fishways. *Vinton v. Welsh*, 9 Pick. 87; *Cleveland v. Norton*, 6 Cush. 383.

Fifth. Because a comparison of similar charters with the statute in question leads to a conclusion adverse to the defendants, such comparison being the safest guide in determining the intention of the legislature. *Mendon v. Worcester*, 10 Pick. 235; *Goddard v. Boston*, 20 Pick. 407; *Commonwealth v. Bailey*, 13 Allen, 545.

A similar statute is St. 1848, ch. 295, which empowered the Essex Company to increase its capital stock, on the condition "that said company shall be liable for all damages which shall be occasioned to the owners of fish-rights existing above said company's dam, by the stopping or impeding the passage of fish up and down the Merrimac River by the said dam." This act was in addition to the act of incorporation, which expressly provided for the maintenance of a fishway in the dam of said Essex Co. St. 1845, ch. 163, sect. 5. In this case the best fishways possible proved insufficient, and the legislature therefore ordered the payment of damages; yet, even then, they did not entirely dispense with the fishway,—on the contrary, the statute contains the words "*stopping, or impeding,*" the use of the latter showing conclusively that fish were still supposed to find a passage over the dam; and if such were the intention of the legislature in that case, after the company had made the best fishway they could, *a fortiori* must it be the true construction of the charter in the case at bar, where no fishway has ever been tried. (Report, page 6.)

Sixth. Because the point last mentioned is in accordance with the doctrine of *Commonwealth v. Essex Co.*, in discussing the very act just referred to, where the Court expressly reserves the question: "Whether, if the fishways actually provided had proved wholly unfit and inadequate for their purpose, and other measures could be provided within a reasonable cost, which could be shown to be probably effectual, the legislature could, by further legislation, have required the company to construct such other fishways;" thus implying that it *could* so require; and if the legislature may require a change in fishways already existing, it certainly may compel corporations to construct them where they have never existed. This question, there reserved, arises directly in the case at bar, for

the case where no fishway is provided, is equivalent to the case where the fishways are "totally unfit and inadequate." In this connection, too, it is significant that the additional act as to the Essex Co. (just referred to), did not repeal the section in the charter requiring a fishway, though it *did* require payment of damages; on the contrary, it seems to have still contemplated the maintenance of fishways, saying that the clause directing fishways in the original charter should be no bar to the claim for damages.

Further, as the right to a free passage for fish is a public benefit, it cannot be waived or extinguished by any neglect upon the part of the Commonwealth in any particular case. *Stoughton v. Baker*, 4 Mass. 522; *Commonwealth v. Alger*, 7 Cush. 100.

Finally, the language of the Court throughout the opinion, in *Commonwealth v. Essex Co.*, indicates that the fishways were still to be maintained. 13 Gray, 246 and 253, on which last page the words are "all those riparian owners whose fish-rights would be damnified by the defendants' dam *with the fishway as it was.*"

Seventh. Because there is no provision in St. 1848, ch. 223, giving any damages to fish-right owners on the river, except those above the dam, in this Commonwealth. But the dam would injure fish-rights in the States of Vermont and New Hampshire, as well as those above provided for, and it cannot be contended that within this Commonwealth, whose courts have always recognized the public right to a free passage for fish, a law could be enacted which would destroy this public privilege in adjacent communities; and although within this Commonwealth the right of eminent domain has been exercised for the purpose of establishing great corporations for the public benefit, and although the legislature, within its own jurisdiction, could require citizens to surrender their rights for the public good, yet there would be no obligation upon the fish-right owners in other States to give up their privileges or to accept compensation therefor,—nor can the fact that they have never claimed damages lead to any inference against them, since they would not be bound to take cognizance of our statutes.

These owners in other States are therefore still entitled to have the best fishways possible in all dams within the limits of Massachusetts.

II. (1.) Another ground upon which the decision in *Commonwealth v. Essex Company* (which case must necessarily be the main reliance of the defendants) rests, is the fact that compensation had been awarded to "all those riparian owners whose fish-rights would be damnified by the defendants' dam." 13 Gray, 253.

(2.) But in the case at bar, the Court have found it to be a fact that fish-rights below the dam are injured, as well as those above; and for such injuries no compensation has ever been made. (Report, page 2.)

Nor is the fact alleged in the answer of the defendants, that no claim has ever been made, by the owners below the dam, upon them for damages, of any legal significance, since they had no remedy save through the interposition of the legislature. *Commonwealth v. Chapin*, 5 Pick. 199.

Hence it follows, that such owners still have rights which a court of equity must regard and enforce, when the legislature designate the appropriate method, as in the statute under which this suit is brought.

(3.) Viewing the charter of the Hadley Falls Co. in the light of this fact, and considering it as a contract between the corporation and the public, it must be construed:

(a) Either as a contract in which the public right of fishways was not expressly excluded, and therefore, by implication, a contract to which the public right was an incident, or (b) else it must be held unconstitutional and void, as to owners of fish-rights below the dam, under article ten of the Declaration of Rights. *Boston & Lowell R. R. Co. v. Salem & Lowell R. R. Co.*, 2 Gray, 1.

If proposition (a) be true, no legislation, regulating the incident right reserved in the charter itself, can be retroactive and unconstitutional, as the defendants claim in their answer, page 9; and if proposition (b) be true, it would be the duty of the legislature to interfere, by amendment or repeal, and it would be fairly within its powers under Rev. Stat., ch. 44, sect. 23. *Durfee v. Old Colony R. R. Co.*, *et al.*; 5 Allen, 239, and cases there cited; *Crease v. Babcock*, 23 Pick. 334.

CHARLES ALLEN, *Attorney-General*,
MOSES WILLIAMS, JR.,
For Complainants.

SUPREME JUDICIAL COURT.

SUFFOLK, ss., JUNE, 1870.

COMMISSIONERS OF INLAND FISHERIES v. HOLYOKE WATER
POWER COMPANY.

SUPPLEMENTAL BRIEF FOR THE COMPLAINANTS.

By *St.* 1866, c. 238, the plaintiffs were required to determine the plan for fishways, and submit them to the owners of dams in the Connecticut and Merrimack Rivers, and it thereupon became the duty of such owners to build the fishways accordingly. By *St.* 1869, c. 422, the plaintiffs were authorized to enforce in equity the construction of the fishways by the owners of the dams; and the present bill in equity is brought for that purpose, against the proprietors of the dam at Holyoke.

The question is, whether the defendants are bound to build a fishway to allow the passage of fish above their dam across the Connecticut River at Holyoke.

I. The general duty of those who build or own dams to provide and maintain suitable fishways is as firmly established as it is possible for any doctrine of law to be established in Massachusetts. This has been declared in several adjudicated cases.

“Every owner of a dam holds it on condition, or perhaps under the limitation, that a sufficient and reasonable passage-way shall be allowed for the fish. This limitation, being for the benefit of the public, is not extinguished by any inattention or neglect, in compelling the owner to comply with it.” *Stoughton v. Baker*, 4 Mass. 528.

In that case, there was a neglect to build a fishway from 1634 to 1789; but it was held that the duty continued. See also, *Commonwealth v. Chapin*, 5 Pick. 199; *Vinton v. Welsh*, 9 Pick. 87; *Commonwealth v. Essex Co.*, 13 Gray, 248.

The legislature have the right, from time to time, to provide the manner in which this duty shall be performed; and they have constantly exercised this right, by requiring the owners of existing dams, in numerous instances, to build such fishways, at their own expense, in such a manner as should be approved by committees named by the legislature, or by the selectmen of towns; and by authorizing and directing committees named by the legislature, or provided to be chosen by towns, to go on themselves and construct such fishways.

Illustrations may be found in the following Statutes: *Sts.* 1780, c. 16, passed Feb. 19, 1781; 1786, c. 7, passed June 27, 1786; 1787, c. 10, § 2, passed July 4, 1787; 1787, c. 33, § 1, passed March 1, 1788; 1787, c. 35, § 2, passed March 19, 1788; 1787, c. 58, §§ 1, 2, passed March 28, 1788; 1789, c. 5, passed June 15, 1789; 1789, c. 8, § 2, passed June 20, 1789; 1789, c. 43, § 4, passed Feb. 27, 1790; 1789, c. 51, § 3, passed March 4, 1790; 1790, c. 8, § 1, passed June 19, 1790; *Sts.* passed Feb. 22, 1792, §§ 1, 2; March 9, 1792, § 4; *Sts.* 1796, c. 83, passed March 10, 1797; 1797, c. 69, § 5, passed March 1, 1798; 1797, c. 70, § 1, passed March 1, 1798; 1797, c. 74, § 1, passed March 2, 1798; 1798, c. 29, § 5, passed June 28, 1798; 1798, c. 78, passed March 1, 1799; 1798, c. 83, § 3, passed March 1, 1799; 1799, c. 68, passed March 1, 1800; 1799, c. 76, passed March 4, 1800; 1800, c. 67, passed March 1, 1801; 1801, c. 59, § 2, passed March 3, 1802; 1801, c. 66, § 5, passed March 6, 1802; 1802, c. 57, § 2, passed Feb. 9, 1803; 1802, c. 63, § 3, passed Feb. 12, 1803; 1802, c. 71, § 4, passed Feb. 16, 1803; 1803, c. 108, § 4, passed March 3, 1804; 1803, c. 152, § 5, passed March 9, 1804; 1804, c. 134, § 1, passed March 16, 1805; 1805, c. 76; 1806, cc. 28, 117; 1808, c. 91, § 8; 1812, c. 106; 1829, c. 55; 1839, c. 134; 1843, c. 20; 1845, c. 79.

The above is not a complete enumeration, but only includes selected instances to show the legislative view of the public importance of preserving our river fisheries, by means of fishways. There can be no doubt at all, in view of this great, though incomplete, enumeration of statutes, that, up to the time of the granting of the charter on which the defendants rely, the legislature always considered that their right to order the construction of fishways in existing dams was full and complete.

II. It has likewise long been the established law of this Commonwealth that a grant of authority by the legislature to erect a dam across a river is to be construed to be under an implied condition to keep an open fishway, unless there is some express provision to the contrary. *Stoughton v. Baker*, 4 Mass. 528. *Vinton v. Welsh*, 9 Pick. 87. *Commonwealth v. Essex Co.*, 13 Gray, 248, 249.

III. The question therefore speedily comes down to this: Whether there is anything in the charter upon which the defendants rely, showing that they were to be exempt from the duty of maintaining a fishway?

There is no express provision in the charter to that effect. And there is no provision from which such exemption can be inferred,

unless it is the provisions respecting the payment of damages to the fishing rights above the dam.

These provisions are as follows:—

St. 1848, c. 222, § 4. "Said corporation shall pay such damages to the owners of the present fishing rights, existing above the dam which the said company is herein empowered to construct, as may be awarded," &c.

§ 5. "The Hadley Falls Co., [the defendants' predecessors] or any of the owners of said fishing rights, may, at any time, apply to said county commissioners to proceed and ascertain the damages to said fishing rights; * * * * and the said commissioners shall determine and award the damages to said fishing rights within sixty days," &c.

Does this language necessarily imply that they were to be relieved from the duty of building any fishway?

IV. There are certain general considerations which will aid in construing the charter.

a. The preservation of the fisheries is for the benefit of the public. The right to have the fish pass up the river is a public right. It is true that the right to catch the fish is in the owners of the soil; but the right to have the fish there so that they can be caught is a public right. See *Commonwealth v. Essex Co.*, 13 Gray, 247.

b. All grants of the legislature, surrendering public rights, are to be construed strictly against the grantees. The grantees will take no powers by implication which are not necessary for carrying the purposes of their charter into effect.

"The grant of privileges and exemptions to a corporation is strictly construed against the corporation, and in favor of the public. Nothing passes but what is granted in clear and explicit terms." *Ohio Life Ins. Co. v. Debolt*, 16 How. 435. See also *Mills v. St. Clair Co.*, 8 How. 581.

"Any ambiguity in the terms of the contract [charter] must operate against the adventurers, and in favor of the public; and the plaintiffs can claim nothing that is not clearly given them by the act." *Stourbridge Canal Co. v. Wheeley*, 2 B. & Ad. 793; cited and approved in *Charles River Bridge v. Warren Bridge*, 11 Pet. 544.

"All grants of privileges are to be liberally construed in favor of the public, and, as against the grantees of the monopoly, franchise or charter, to be strictly interpreted. Whatever is not unequivocally granted in such acts is taken to have been withheld; all acts of incorporation, and acts extending the privileges of incorporated

bodies, are to be taken most strongly against the companies." Sedgw. on St. & Const. Law, 338, 339, and *seq.*, and numerous cases.

"In all grants from the government to the subject, the terms of the grant are to be taken most strictly against the grantee and in favor of the grantor—reversing the common rule as between individuals—on the ground that the grant is supposed to be made at the solicitation of the grantee, and the form and terms of the particular instrument of grant prepared by him, and submitted to the government for its allowance." *Commonwealth v. Roxbury*, 9 Gray, 492.

For example: an authority to fill up land and construct a wharf does not extinguish a highway. *People v. Lambier*, 5 Denio, 1.

V. The language of the charter upon which the defendants rely by no means implies that the damages therein provided were to be paid for the destruction of the fisheries above. The building of the dam, even with a fishway, would necessarily cause great injury to the fisheries, and this injury would be a proper subject of compensation.

It was known in 1848, when this charter was granted, that no fishway would leave the fisheries above such a dam unimpaired. This had been ascertained and brought to the attention of the legislature by the experience of the Essex Company.

If it had been expressly provided in the charter of the Hadley Falls Co., that they should build a fishway, it would still have been necessary to have the same provision which now exists, or one substantially similar, for compensation to the owner of the fishing rights above the dam for the injury done to them.

The provision for compensation is, to say the least, just as consistent with the idea that there should be a fishway as that there should not be one. How, then, can it be contended that it implies authority to build the dam without a fishway?

The language of the charter contemplates a partial injury to the fishing rights rather than their total destruction. If it had been intended to provide compensation for their destruction, it would have been more natural to say that the county commissioners should ascertain "*the value of said fishing rights,*" rather than "*the damages to said fishing rights;*" and that they should award *such value*, rather than the damages to them.

There is every presumption that the legislature would not intend to allow the total destruction of the fisheries, when they might be partially preserved by a fishway.

No dams in this State, so far as known, had been allowed to be built without fishways. The universal rule, it is believed, was the other way. Simply omitting to provide for a fishway in terms,

raises no presumption that none was intended, because the well known law, constantly practised on, was that fishways could be expressly ordered afterwards if the owners of the dam should neglect their duty. What reason is there to suppose that this dam alone, of all the dams in the Commonwealth, was to have no fishway?

A taking under the right of eminent domain, must be limited to the necessity. No greater rights can be taken than are required. So in construing a grant, the authority will be deemed to have been limited to the necessity.

The exigencies and requirements of the business of the corporation did not require a dam without a fishway. The report of the case expressly finds that the fishway would not diminish their water power; unless, indeed, they should wish to add to the permanent height of their dam by flash-boards. There is nothing to show that they have any right to add such flash-boards at any time. The charter, § 3, gives them the right to build a dam *of a certain height*. In the absence of any express finding to the contrary, it may be presumed that their present dam is as high as they have a right to make it. There is certainly no presumption to the contrary.

It would require a very strong case indeed, to carry with it a presumption that the legislature intended absolutely to close the Connecticut River against the passage of fish.

There is every reason to suppose that a regard for the public right of our own citizens in the river fisheries, as well as the comity due to the people of Vermont and New Hampshire, would prevent the legislature from granting leave effectually to close up the river, unless there was an overpowering necessity for it. In the present case, no such necessity existed. No such privilege was essential to the purposes for which the charter was granted to the Hadley Falls Co. Those purposes can be just as well subserved, (or, in any event, almost as well,) with any existence of a fishway. Why then should the language of the charter be construed to give them a greater privilege than what the language naturally implies, or their necessities require?

The damages which they have paid must be presumed to have been estimated for the injury done by the dam with a fishway in it. It must have been assumed that they would do their duty. It was their duty to build a fishway; and the tribunals had a right to assume that they would do it. If by their delay has happened [and there can be no means of ascertaining that the fact is so] that they have been compelled to pay more damages than would have been awarded in case of a prompt compliance on their part with

their duty, this is of no legal significance. The tribunals may possibly have had a prophetic doubt as to the disposition of the company to do their duty. Legally, it is to be presumed that the damages were assessed upon the right basis. The defendants cannot be heard to say that they have paid too much damages.

VI. The fisheries below the dam are also injured by the construction of a dam without a fishway. No compensation being provided for this injury, the charter was to this extent unconstitutional. A grant of a right to take private property under the right of eminent domain must make provision for compensation, or else it is void. *Boston & Lowell Railroad v. Salem & Lowell Railroad*, 2 Gray, 37.

If, therefore, the true construction of this charter is, that it authorized a close dam, without a fishway, the charter was unconstitutional, so far as the exemption from the liability to make a fishway is concerned, because it injured the fishing rights below the dam without providing compensation.

It is no answer to say that with a fishway the dam would still have injured the fisheries below. That fact does not appear; and on the report cannot be assumed to exist. It may well be that the fishway would have rendered any injury to the fisheries below wholly unappreciable.

Nor is it any answer to say that it does not appear that the owners of those fishing rights have ever claimed that they were damaged. It does not appear that they have not so claimed; nor is it the duty of these plaintiffs, or of the Commonwealth, to ascertain and prove how the fact is.

If the Commonwealth finds that a grant of a charter is used otherwise than according to the intention, and that larger privileges are assumed and exercised than the charter warrants, or that a charter by inadvertence is made to confer unconstitutional powers, it may and ought to interfere and recall the corporation to its duty, under the constitution and laws, whether anybody is injured by the unwarranted assumption of authority or not.

A fortiori, when not only the private rights of citizens, but the public rights are infringed.

The Commonwealth does not stand in the position of a stranger who cannot question the extent of authority exercised.

The fact that the fisheries below are injured by the construction of a dam without a fishway, and that no compensation was provided for such injury, is an additional argument to show that the true construction of the charter did not authorize the construction of such a dam.

CHARLES ALLEN, *Attorney-General*.

SUPREME JUDICIAL COURT.

AUGUST 31, 1870.

In the case of The Commissioners of Inland Fisheries *v.* The Holyoke Water Power Co., the clerk was ordered to enter a *Decree for the Complainants.*

Brief statement of the grounds and reasons of the decision.

The statutes under which the Respondents have been required to make a fishway in their dam were within the constitutional power of the legislature and did not impair the obligation of any contract.

[E.]

ON THE POSSIBLE EXHAUSTION OF SEA FISHERIES.

SECOND NOTICE.

Investigation before the Committee on Fisheries.

The Committee on the Fisheries to whom was committed the petition of T. D. Eliot and twenty-five other petitions in aid, aggregate number of names 3,023, asking for a Prohibitory Fishery Act; also, sixty-two remonstrances, aggregate number of names 7,958; also, William L. Bradley Manufacturing Company at Weymouth; Pacific Guano Company at Wood's Hole; Cape Cod Railroad Company, and Resolutions of the Gloucester Board of Trade against the same, have duly considered the same and submit the following Report:—

The petitioners claim that several modes of fishing now in use, as by traps, pounds, purse-seines, sweep-seines and gill-nets are increasing in the waters along the shores of this Commonwealth, and that these novel modes of fishing are fatally prejudicial to the production and increase of fish, and ask the legislature to enact such laws as will protect the fish and those of the community that are interested in their continuance.

In the hearings before the Committee on the Fisheries there was no evidence to convince them that there is any necessity for the passage of such an Act as is asked for by the petitioners. It appeared in the evidence that the scup, tautog, sea bass and striped bass in Buzzard's Bay have diminished, during the last few years, comparatively few having been caught in that locality, while in other places outside of that bay the fishermen have seen no diminution in these species, but rather an increase. It does not necessarily follow that when fish leave a locality which they have long been accustomed to visit annually, that they have been driven away by over-fishing. Changes are taking place from year to year, and during the past fifty years many species that were abundant, and in their annual migrations visited our waters and remained on our coast during the summer, have long since disappeared, and years

have passed away and not one of them is seen in our waters, while others have appeared that are new, and increase in numbers annually; others, again, have disappeared and after many years the same species has returned in great abundance and again become annual migratory species, visiting our shores each season. Such have been the changes long before a weir, trap or pound existed in Massachusetts waters, and while nets were used only to a limited extent.

The cause of the diminution of fish in Buzzard's Bay may be a scarcity of the bait on which they are accustomed to feed, as large beds of mussels on which some of these species feed have been killed by star-fishes (five-finger, so called by the fishermen). The refuse of manufactories, as copper works, gas works, and prussian-blue works, and other deleterious substances thrown into the water, have also affected the clams and other species of mollusca (shell-fish). These causes may have tended to diminish the numbers of fish that in past years have visited this locality. But the great cause that has driven many species from our waters is the bluefish, which appeared on the coast of Massachusetts, south of Cape Cod some thirty-five years ago, but did not appear until 1847 north of the Cape; wherever they appear they drive away nearly all other species of fish. During their stay they are caught with hooks, nets and weirs.

North of Cape Cod the weirs catch mostly bluefish, which are taken in great numbers as they go in shore. One weir at Eastham caught last season no less than 65,000. When the north-east storms of autumn drive into our bay the colder waters, the bluefish leave, and other species of fish which were driven away by them on their arrival, re-appear, as the mackerel, menhaden, and others that are marketable. The bluefish have been no doubt the principal cause of the diminution of other kinds of fish during their stay on our coast.

The weirs south of Cape Cod catch mostly bait fish, as herring (alewives) and menhaden, which are sold to vessels belonging to Gloucester, as bait for their George's Bank fishery. If this mode of fishing were discontinued, Gloucester vessels must be without bait for a part of the season and the large fishing fleet of Cape Ann must lie still.

Scup, tautog, sea bass, striped bass, and other kinds of fish that are not used for bait are caught by the weirs in our waters south of Cape Cod only in small quantities, and as a secondary and incidental matter; the amount of these kind of fish caught by such weirs is too small to have any considerable effect upon the increase or diminution of these species. As soon as the bluefish arrive on our

coast, about the first of June, these weirs are taken up; being made of net which is easily destroyed by the bluefish, it would not pay to keep them down longer.

The geographical distribution of fish along our coast is so extensive, their numbers are so great and the number of eggs produced by them is so vast, requiring only a small percentage to mature in order to overstock the waters, that no general legislative enactment can be needed for their continuance or increase. The comparatively small quantity taken by man can have but little effect in diminishing their numbers, and but little tendency to exterminate the race. Though in small bays and arms of the sea, it might be possible in certain seasons to produce, by overfishing, a perceptible diminution of the fish then visiting them, yet the evidence brought before the Committee failed to show that such had been the case in any of the bays in this Commonwealth, and if there were in any season a diminution from such cause in our bays they would probably be replenished in the succeeding season by a fresh supply from the ocean.

Whenever fish have left any bays or localities permanently it has been in most cases from causes unknown to us, and Acts of legislation would be powerless to bring them back. •

In view of the evidence produced before them, the Committee see no reason for recommending prohibitory legislation, as asked for by the petitioners.

The Committee may here call attention to the British Commission, appointed to inquire into the sea fisheries of Great Britain and Ireland, whose report was laid before Parliament in the year 1866. This commission consisted of Professor Thomas H. Huxley, Messrs. George Shaw Lefevre and John Caird, who are among the ablest men in Great Britain in their several departments. It visited nearly all the fishing localities of Great Britain and Ireland and the adjacent waters; it examined a vast number of witnesses, asked and received answers to nearly sixty-two thousand questions, and probably made a more thorough investigation than was ever before made by any commission. Though many of the fishing localities examined by them had been fished over for many centuries, and though in addition to our modes of fishing by weirs, nets and seines, the *beam trawl* is there used, which is far more destructive to fish and their spawn and young than any mode of fishing employed or approved by us, yet that commission came to the unanimous conclusion that there was no danger to the sea fisheries, either in the open sea or in bays and arms of the sea, from overfishing, and that any restriction was unnecessary and useless, and

they recommended that all the existing prohibitory or restrictive statutes of Great Britain should be repealed.

The Committee, in conclusion, report unanimously that the petitioners have leave to withdraw.

Per order of the Committee,

N. E. ATWOOD, *Chairman*.

FISHERIES ON THE COAST OF MASSACHUSETTS.

[Remarks of Mr. ATWOOD, of the Cape District, in relation to the petition to prohibit Net and Seine Fisheries.]

SENATE CHAMBER, April 19, 1870.

The report (leave to withdraw) on the petition of T. D. Eliot and others, came up for acceptance by special assignment.

Mr. HAWES, of Bristol, arose and said, that as a large number of the petitions asking for a prohibitory fishery Act came from his District, he was not ready to vote until he could have some further explanation.

Mr. ATWOOD, of the Cape District, Chairman of the Committee on the Fisheries, arose and spoke at length, substantially as follows :

Mr. President—As so many petitions have been presented to this legislature and referred to your Committee on the Fisheries, asking for an Act to prohibit certain modes of fishing now in use in the waters of this Commonwealth, I feel it to be a duty incumbent on me, as a representative of a district extensively engaged in this branch of industry, to occupy some time in giving somewhat in detail the reasons why your Committee have unanimously reported leave to withdraw.

Early in this session, on the 12th of January, there was presented and referred to the Committee on the Fisheries, the petition of Charles W. Lovett, Jr., and 64 others, claiming to be citizens and tax-payers of this Commonwealth, asking for an Act to prevent the taking of certain *salt water* fish in weirs and pounds, and also that the taking of fish known as Spanish mackerel and striped or sea bass, in any seine or net, may be prohibited; but that the same may be taken between the first day of June and the first day of December, by

hook and line only. On the following day the petition of T. D. Eliot and 1,225 others was presented and referred, and subsequently a large number of petitions in aid of the same, claiming that the practice of *pound fishing, trap fishing, drag seining, purse seining* and *gill netting*, is seriously and fatally prejudicial to the production and increase of fish. They pray that the legislature will, by suitable enactments, protect said fish and those of the community interested in their continuance and production, from these novel and improper modes of fishing. Also there has been presented and referred a large number of remonstrances against the passage of any general prohibitory Act. For their number, I refer senators to the printed report of the Committee.

Though the two first petitions were not in aid of each other, still they were aiming to accomplish the same object, and they seemed to be inseparably connected; so much so that your Committee deemed it expedient to hear the parties who would represent both at the same time. Accordingly all the parties were notified, and the hearing commenced on the 15th of February. No less than eighteen sessions of the Committee were given to these hearings, during which time many witnesses testified, and very little was learned from the evidence that proved to the Committee that fish were being exhausted. All agreed that the scup, tautog, sea bass and striped bass, had within a few years diminished in Buzzard's Bay; but failed to show that over-fishing was the cause of the diminution. Like the many fishermen that I know, the witnesses were not well acquainted with the habits of fish. They study them no farther than they contribute to their pecuniary interest. At most they possess only a local knowledge of the fish with which they come in contact. They prosecute the fisheries for their support, and do not make the habits of fish a special study. Sir, if any other matter upon which there were more than 11,000 names on the petitions and remonstrances should come before the legislature, what would the Committee expect? They would expect that experts and men acquainted with all the practical workings, would come before them. An ordinary committee on the fisheries might expect men to come before them on a subject of so much importance as our *sea fisheries*, that possessed a knowledge of the geographical distribution, migrations, habits, food, time of depositing their spawn, growth and development of their young, as far as it could be known, and besides all, the changes that have taken place during a long series of years. That if certain species had diminished in Buzzard's Bay, from whatever cause, is there danger of the race being exterminated? The fishes that inhabit

our waters, and in their migrations visit our coast, differ widely from those that were upon our fishing grounds when I first engaged in the fisheries.

Mr. President, allow me to lay aside the evidence before the Committee, while I briefly allude to the changes that I have noticed during a long life of practical experience in the fisheries.

I can go back to no earlier date than 1816, when I entered the fishing boat and followed fishing as a business for a period of *fifty-one* years, during which time there have been many changes. I shall speak of only a few species. The scup, that has been so abundant for many years south of Cape Cod, extends to Florida, and is caught in great numbers along the coast. It finds a ready sale in New York and other markets, but in Boston market it is not known as a marketable species, and is seldom seen there. Only a few straggling specimens venture into the colder waters north of Cape Cod. Witnesses stated before the Committee that they had a tradition informing them that scup first appeared in Buzzard's Bay in 1793. If so, I ask was it then that they first came into existence, or did they come from some other locality? I have been informed that in examining the old shell heaps that have been deposited by the aborigines of this country many years ago, the bones of this species have been found, showing that they were here before this country was settled by Europeans. If they were here at that time, is it to be supposed that they were driven away by the Indians with their rude implements of fishing?

When I first engaged in the fisheries, and for many years after, there was a species of mackerel that annually visited our waters, known by the name of Spanish Mackerel, that were abundant. It was not the species now called by that name. It was about two-thirds the size of a common mackerel, known to science by the name of *Scomber Dekayi*. (Excuse me for using classic names; I do it for the reason that there are so many local names for the same species, I fear that I may not be understood by any who may be acquainted with ichthyological science.) This species, although plentiful for many years, has long since disappeared, and I have not seen a single specimen for the last twenty years. They disappeared long before a weir, trap or pound was used in our Massachusetts waters. The cause of their leaving us is unknown. We can assign no reason. There have also been great changes in our common mackerel. While in some years they come to us in great abundance, in other years they are comparatively scarce. In 1831, 383,559 barrels were packed and inspected in this State, after which there was a falling off in the catch, so much so that from

1839 to 1844, the number of barrels caught did not exceed 75,000 in any one year, for five years in succession. In 1841 the quantity caught was only 50,992 barrels. They have since increased. During the last ten years the catch has been, with the exception of two years, upwards of 200,000 barrels annually. Last season it was 234,000 barrels. It will be seen that the catch of fish from year to year differs as widely as the product of our land.

About 1840 there appeared on our coast, south of Cape Cod, large quantities of shad, which appeared to be the same species with those that visit the Connecticut and Merrimac Rivers annually (*Alosa præstabilis*). Fishermen from Massachusetts, Connecticut and Rhode Island engaged in this fishery, and found it profitable. In 1842 an Act was passed by the legislature to prohibit fishermen from other States, from fishing for shad within a line drawn from Monomoy Point to Point Gammon. I myself engaged in this fishery, but we found there was no need of the passage of such an Act. The shad appeared in small numbers, so that not enough were caught to pay expenses. They were also caught in large quantities in the waters north of Cape Cod. They then disappeared, so that only a few straggling specimens have since been caught in these localities. Where were they before they appeared in our waters? What was the cause of their coming? Where are they now? All that can be said in answer, I can say in three words—they are gone.

Sir, I ask to be allowed to allude briefly to two species of fishes that are not caught by any mode of fishing that we are asked to prohibit. I do so for the reason that no less than four times, petitions have been sent to the legislature asking for an Act to prohibit fishing with trawl lines (so called) in Massachusetts Bay. The report from the Committee has always been "leave to withdraw." In 1858, when the report came up in the House of Representatives, it was discussed at length, and it was there stated that if this mode of fishing was not prevented by legislative enactment, soon haddock would be as scarce as salmon. The report of the Committee was accepted, and this mode of fishing has been in use since that time, and this species has been increasing from year to year, until they have increased in vast numbers, so much so that they are too plenty for the fisherman or dealer, and during the spawning season, which is the spring, they are sold at a low price,—from two dollars down to fifty cents per 100 lbs. But it may be said the consumer pays a high price. I cannot help that; it is not that that I am discussing. I am trying to show the danger of exterminating the race of fish, if there is any, and do not intend to leave my subject,

lest I may be called to order. When I first engaged in the fisheries, haddock was scarce on our coast, and in winter sold much higher than cod. They did not increase for many years after. They, however, became plentiful when the trawl line was first used,—about 1850,—and every year they seem to be increasing. On the 4th of last March, when a large number of fishing boats were out, the catch was larger than I ever knew before. The next day, 5th, there was brought to this city and sold at Commercial Wharf, of cod and haddock, 621,953 lbs., as taken from the books of dealers that bought that day,—a larger quantity than ever was sold of all kinds of fresh fish in a single day since Boston has been a city. What has been the cause of so great an increase? If I was asked how their numbers could be diminished, I have two ways now suggested to my mind: one is to introduce the beam trawl which has not been used in our waters, which is a large net-bag with a long beam across its open mouth, which is kept up some two feet from the bottom by an iron frame-work at each end of the beam, and as it is dragged along by the fishing boat the fish pass into the net and are caught in the pockets at the sides as they attempt to pass out. This net being dragged over the bottom would destroy the young fish as it passed over them, and might tend to diminish their numbers.

One other way would be to hire the fisherman to leave them, and to stand back and fold his arms and see nature perform her wonderful work without the interference of man. The present mode of fishing, catches vast quantities of a species of flat fish (*Platessa dentata*) which no doubt fed upon the spawn of haddock when the hand-line only was in use.

One other species, our common halibut, which is caught in the same way, have greatly diminished. When I first engaged in this fishery, Boston was supplied wholly with halibut caught between Cape Cod and Nantucket Shoals. The demand was limited,—only a few could be sold. There were no railroads. Boston only wanted enough to supply the city and the surrounding towns. As facilities for transportation increased, and ice began to be used to keep them, they were sent far away. The supply would not meet the demand. The fishery was prosecuted by vessels from Gloucester, on George's Bank, and also on Brown's Bank, the western coast of Nova Scotia, and upon the Banks of Newfoundland, and voyages have been made to Greenland, and halibut have been caught in quantities as far north as the latitude of 68°, on the western coast of Greenland. They seem to be decreasing on all the fishing grounds. But I must pass them by and leave senators to decide whether or not overfish-

ing has been the cause of the increase of the one and the diminution of the other of these two species.

It appeared in evidence before the Committee, that the fish known as the squetague is increasing in the vicinity of Buzzard's Bay, and along the shore south of Cape Cod. Some sixty years since it was vastly abundant in the southern part of Massachusetts Bay, and although absent for so many years it seems to be returning to its former haunts.

But the great change that has taken place in our fisheries has been caused by the return of the bluefish. This species was abundant on our coast many years ago. We are informed that in a journal of the first settlement of the island of Nantucket, written by Zacheus Macy, 1792, and contained in the Massachusetts Historical Collections, he says, a great pestilence attacked the Indians of that island in 1763 and 1764, and that of the whole number, 358, 222 died. In that year, he says, the bluefish disappeared, and I have no knowledge of a specimen being seen here for more than 70 years. We are informed that they are found in other localities. They are said to occur on the western coast of Africa, around the island of Madagascar, and also at Australia; if so they are found over a wider geographical range than any other species with which I am acquainted, inhabiting the waters in both the torrid and temperate zones. After an absence of so many years they returned, as appeared in evidence before the Committee, about 1832, along the shores south of Cape Cod. They did not come north of the Cape so as to affect our fisheries, until 1847, when they appeared in vast abundance, and drove away from our bay nearly all other species. I was at that time engaged in fishing for mackerel with nets. This was the last of our catch; and every year since, when our fishermen are engaged in this fishery, they appear. I have known them to appear as early as the second day of June, but usually they do not come until a few days latter,—from the fifth to the fifteenth. When they first appeared in our bay I was living at Long Point (Provincetown), in a little village containing some 270 population, engaged in the net fishery. The bluefish affected our fishery so much, that the people were obliged to leave the place. Family after family moved away, until every one left, leaving that locality, which is now a desolate, barren and sandy waste.

These fish not only depopulated our bay of nearly all other species, but they depopulated my village and my home. It was a matter of surprise to your Committee, that men professing to be acquainted with fish, should come before them and say they did not know that bluefish ate any other fish but menhaden; and as they

are not an edible species, no matter how many they destroyed; and also say they did not know that they drove other species away. Call them, sir, by whatever name we please; whether bluefish, of Massachusetts Bay; snapper, of New Bedford; horse mackerel, on the shores of Rhode Island; or tailor, in Delaware and Chesapeake Bays, they are the same *Temnodon saltator* still, and deal out destruction and death to other species in all the localities they visit.

One other, a species of flat fish which is called dab or plaice at home, but when we bring it to Boston and offer it for sale we call it Turbot. It is the *Platessa oblonga*. This species was exceedingly abundant along our shores before the bluefish came. It is a bottom fish, and does not come so directly in contact with the bluefish as top-water swimmers; still it has almost wholly disappeared, owing to the bluefish having destroyed its favorite bait, which is the common squid. It seems to be nearly exterminated in the waters north of Cape Cod, only a few being seen.

The striped bass have diminished in the vicinity of Cape Cod, as the bluefish have destroyed the bait upon which they fed.

The so-called Spanish mackerel (*Cybeum maculatum*) Cuvier says, is an inhabitant of the Caribbean Sea, extending southward to the coast of Brazil. Dr. Holbrook mentions it in his Fishes of South Carolina, as being found in the waters along that coast. It has wandered northward until it has reached the southern coast of Massachusetts, and even specimens have been taken north of Cape Cod. It sells in our market at a higher price than any other species. It is no doubt an excellent fish, but is probably not so much better than our common mackerel as the prices seem to indicate. It has been selling in Quincy Market, for a few summers past, at from fifty cents to one dollar per pound. It has been increasing in our waters for a few years, and the prospect is it will continue to increase, until it will be a fishery of considerable importance. There is no danger of destroying them by catching them by any way we can, when it is only the few wanderers that come to us from the localities where they inhabit. I think they need no legislative protection to increase their numbers.

Such are a few of the many changes that have taken place since I first engaged in the fisheries. Time will not allow me to go into detail of the some 150 species found along our New England coast. They may be said to form one great chain, each species being a separate link, having its own peculiar history and habitudes.

I pass now briefly to notice their fecundity. We look with wonder and astonishment at the provisions in the animal economy.

How vast is the number of eggs produced by a single fish ; hundreds of thousands, which, if any considerable percentage should come to maturity, the waters would be filled to overflowing.

Take a few thousand specimens and allow ten per cent. to come to maturity, multiply them together for ten years, and how great would be the number. And what is that, when compared with the countless myriads that swarm our coast annually ? their numbers how vast ! Human ingenuity has invented no means by which they can be enumerated ; their numbers are only known to Him who created them, who feeds them with a bountiful hand, and watches over them with more than parental care.

Sir, if we study them with reference to their longevity we see marks on them indicating age ; the loss of fins ; scars where they have at some time received wounds, that have permanently healed ; marks of physical debility, which appear to be the result of advanced age. I regret to say that no Linnæus or Cuvier, nor all the researches of science have ever been able to give us any indication by which we may know the age that fishes live, with any degree of certainty. They pass off and on the coast as the seasons change, during their natural lives, however long they may be.

In view of all the foregoing facts, where is the danger of exhausting our fishes ? I fail to see the danger of exterminating them.

The British Commission that was appointed in 1863 to investigate the fisheries of Great Britain and Ireland, visited nearly all the fishing places in the United Kingdom, and made a thorough investigation ; asked and received answers to nearly sixty-two thousand questions. They came to the unanimous conclusion that there was no danger of exhausting the fisheries, either in the open sea or in any of the arms or estuaries along the coast, with all that man could do, and finally made their report to the British Parliament in 1866.

There were persons that did not wholly agree with the British Commissioners. One of the most prominent is J. B. A. Rimbaud, who has published a work on fishes of the southern coast of France. Himself a fisherman, he says that the migratory species that go off to sea in schools and return each season cannot be diminished by over-fishing, but local fishes can be exterminated by constantly fishing for them, and such has been the case in the locality where he had been accustomed to fish.

Of the two I allow Rimbaud to be the best qualified to judge, as he has acquired his knowledge by practical experience in the fisheries, and the British Commissioners had gained their information from others. Sir, I hope I may not be charged with undervaluing scientific research ; no man has a higher appreciation of the labors

of scientific men than myself. Their kindness to me in aiding me in my investigations of fishes has laid me under the greatest obligations. I owe to them a debt that I can never repay.

Sir, I call attention of senators at this board to the locality where Rimbaud has gained his information,—the southern coast of France. France on the Mediterranean, is not like our own coast. There the land is high, and deep water near the shores. The area of fishing grounds is comparatively limited. Our own coast is low, and shoal water extends off a great distance from the shore. Besides that, the great chain of banks commencing with Nantucket Shoals and running eastward a thousand miles, and terminating with the Great Bank of Newfoundland, gives us an immense area of fishing grounds.

On the coast of France there is not so great change of temperature in the water from summer to winter, as on our own coast. The Gulf Stream comes out through the straits of Florida, running up the coast to Cape Hatteras, from whence it turns eastward. As it passes, it leaves our New England out in the cold; its course is onward until it reaches the shores of Western Europe, making the water comparatively uniform through the season. I ask are not the fish on the coast of France more permanently *local* than those on our own coast, where there are great changes of temperature from summer to winter? Tell me, sir, how many are there of our fishes that are not more or less migratory. Senators will see that our fishes and fisheries are not like those of Europe.

Mr. President, lest I may be misunderstood, I desire to define my position. I firmly believe there is no necessity for the passage of any general legislative Act for the protection and regulation of our sea fish and fisheries. If fish have diminished in any of the small arms of the sea, I should have no objection to the passage of a local Act, provided it did not interfere with the rights of others; but I must confess that I am slow to believe that when fish have left a locality, that any Act on our statute books will bring them back. If we wish to increase and stock our inland waters, it cannot be accomplished without protection. The building of dams across the streams, throwing of deleterious substances into the waters have diminished the fish. But in the great sea man cannot pollute its waters by any thing he can do.

If this legislature should pass an act to prohibit those modes of fishing that have been called by the petitioners novel and improper, what would be the practical working? It would not only affect those directly engaged in them, but it would have also an indirect bearing. The large fleet of vessels belonging to Gloucester, are, a part of the season, dependent on these fisheries for bait to be used

in their bank fisheries. The question was asked at the time of the hearing before the Committee, how the Cape Ann bank fishermen procured their bait before these modes of fishing came into use? but was not answered. When vessels from Gloucester first engaged in the halibut fishery on George's Bank, they met there immense shoals of sea-herring (*Clupea elongata*). They could be taken in nets on the top of the water. After a few years they became less abundant, and were not seen schooling, but could be caught by sinking the nets several fathoms below the surface. Long since they have left that locality, and none have been caught there for several years.

Our mackerel fishermen require a large quantity of bait to be used in the prosecution of this fishery, which is principally menhaden, caught in weirs or seines. Some 7,000 barrels of this fish was used by Provincetown vessels engaged in the mackerel fishery last season. Their whole catch of mackerel was about 25,000 barrels.

There is a large amount of capital invested in our fisheries, giving employment to a great number of men, who follow a life of hardship and exposure. They are a useful class of men, as they are producers. By their labors they bring to our tables a large amount of wholesome and nutritious food, which is a blessing to our people.

Sir, allow me one brief moment while I allude to the life of a fisherman. He may enter the fishing-boat at nine years of age. Deprived of the advantages of school education, he follows his business from day to day. He may engage in some dangerous voyage. Follow him to the Banks of Newfoundland, where he is not only exposed to gales and storms,—he may in some seasons be surrounded by enormous icebergs, whose gigantic height and massive bulk add to the danger. He is filled with fear lest his little bark may come in contact and sink beneath his feet. Besides this, the merchant ship, on its passage to or from Europe, may in some thick, dark and stormy night, at one stroke put an end to his earthly voyage. What harder occupation, what bolder daring can man display than to lie down to rest shrouded in the gloomy solitude of a Newfoundland fog. As he leaves the cold, wet and lonesome deck, at the end of his midnight watch, worn down by hardships and exposures, he lies down upon his bed, and while his cradle is rocked by the mountain billows, he courts that sleep that may know no waking. Day after day he looks forward with pleasing anticipation to the time when his voyage will end; when he will return; when he can rest from his toils, safe in the bosom of his home. Year after year, as his physical energies begin to relax, he dreads it more and more. He is still compelled to work for his support, and the support of those

that may be dependent upon him. Few fishermen get rich, while a great many of us remain poor. He may abandon his business and stop on shore. With a few nets, or some other implements of fishery, he may be able to procure means to supply his wants.

The great question is, What is the danger of exhausting our fisheries if these modes of fishing are continued?

Nets have been used from time immemorial. We have an authentic history that has come down to us, that tells us that more than 1,800 years ago, "Jesus walking by the Sea of Galilee, saw two brethren, Simon called Peter, and Andrew his brother, casting a net into the sea: for they were fishers. And he said unto them, Follow me, and I will make you fishers of men. And they straightway left their nets and followed him. And going on from thence he saw other two brethren, James, the son of Zebedee, and John his brother, in a ship, with Zebedee, their father, mending their nets; and he called them. And they immediately left the ship and their father, and followed him." This not only shows that nets were in use at that remote period, but that they also needed mending, plainly indicating that they were somewhat like our nets.

From the foregoing considerations that I have so briefly stated, your Committee came unanimously to the conclusion that it was their duty to report that the petitioners have leave to withdraw.

The report and speech of Capt. N. E. Atwood are here printed entire, because they show the opinions of a man who probably knows more of the habits of our cold temperate sea fishes, than any one in this country. The petition for abolishing weirs, &c., *ought* to have brought out much valuable testimony; but it proved quite otherwise, and a great part of the depositions, during this tedious hearing, only exhibited the local ignorance and prejudice of the witnesses. And the Chairman was quite right when he said, "These witnesses do not know one-half of what they ought to know."

Although nothing can be better than the historical data of Mr. Atwood's speech, some criticism may perhaps be allowed on his logic. The point of his argument may be put in the following syllogism. 1. I have known certain fishes to grow scarce when there was no excessive fishing. 2. Scup, tautog, sea-bass and rock-bass have grown scarce. 3. *Therefore*, these four fishes have grown scarce without excessive fishing. But he seems here to assume the point in contest, to wit: the cause of the scarcity. Now the report

admits that scup, tautog, striped bass and sea-bass have, within a few years, diminished in Buzzard's Bay. The very interesting contemporary investigation in Rhode Island* shows, that everybody testifies to the "gradual diminution of the number of fish entering the bay or river"; and it further appears that "*contemporaneous* with the introduction of traps was a decrease of fish." The great amount of evidence there printed tends to prove that there is no lack of proper food for the fish, and that dyes and other impurities cast into the bay have not the smallest effect in driving away the fish or in destroying their food. And these results are supported by the evidence in the Massachusetts hearing—so far as it goes—and by the investigations of the Commissioners of this Commonwealth.† How then do the facts stand? Here are four important fishes, of *different* genera, of *different* habits, eating to some extent, *different* food; and these different fishes suddenly *agree* in diminishing, and that diminution is, in some cases at any rate, *contemporaneous* with the start of trap and weir fishing. In such a case, on whom does the burden of proof lie? Most certainly it lies with the advocates of trap-fishing to show that this method does *not* diminish the fish.

That this is the view taken by the Rhode Island Joint Committee is proved by the vote they recommend, by which trap-fishing will be severely curtailed in the Narragansett waters.

* Report of the joint special committee of the General Assembly of Rhode Island on the Fisheries of Narragansett Bay, 1870.

† Report for 1865, p. 18, p. 53.

[F.]

IN THE MATTER OF THE APPLICATION OF ALLEN LOOK AND OTHERS
FOR A LEASE OF TISBURY GREAT POND, OR NEWTOWN POND,
SO CALLED.

DECISION OF THE COMMISSIONERS ON INLAND FISHERIES.

The petitioners and remonstrants having been publicly heard on Jan. 25th, 1870, and privately on other occasions, it appears :

That said pond lies wholly in Tisbury in Dukes County (or, according to some, a small part lies in Chilmark). It is a large sheet of water fed by certain brooks, and separated from the sea only by a narrow beach. The natural fishery (except perhaps for eels) is of small value ; but if a passage be cut through the beach, certain fishes will come into the pond, especially herring (or alewives), smelts, striped bass, and white perch. Hence it is plain that this fishery is an artificial one and depends on cutting a passage through the beach. Therefore the first question is, Who has authority to cut said passage? The persons having such authority are the commissioners of sewers appointed by the court, who, whenever the pond gets so full as to injure the border lands, may, at the request of the owners of said lands, cause the beach to be opened and may assess the cost on the said owners.

In 1861 the Border proprietors through their commissioners of sewers, entered into an agreement with certain persons known as "Fishermen," who proposed, at proper seasons and with permission of said commissioners, to open the beach, in order to catch fish ; and they agreed to pay the expense of such opening ; and they further agreed to bear one-half the expense of putting a dam across Quansuc Creek, in order to control the flowage of Black Point Pond, which lies to the west of Tisbury Great Pond. The Border proprietors of Black Point Pond had been accustomed to drain their water through Quansuc Creek into Tisbury Great Pond and thence into the sea ; and this dam was to enable them to keep up their own pond, when Tisbury Great Pond was lowered. It appears, however, that Quansuc Creek was not, at all times, a natural communication between Black Point and Tisbury Great Ponds ; thus in 1815 it was entirely stopped up and so remained for many years, until about 1830, when the Border owners of Chilmark Pond, lying west of Black Point Pond, caused said Quansuc Creek to be

dug out, so that they might drain said Chilmark Pond, through Black Point and Tisbury Great Ponds, into the sea. They so drained for eight or ten years, when they abandoned it and cut through their beach so as to drain directly into the sea. In these premises, it is the opinion of our counsel that neither the Border owners of Chilmark nor of Black Point Ponds have legal claim to drain through Tisbury Great Pond without permission of its Border owners.

We thus eliminate the rights of drainage of other ponds and come to consider the rights of fishery in Tisbury Great Pond itself. In this respect it does not differ from other so-called "great ponds;" and its fishery is free to the inhabitants. The original grant of Lovelace for free fowling and fishing does not strengthen this right, which, according to decision of our supreme court, is under control of the legislature; and such control, in regard to fishing, is given to the Commissioners on Inland Fisheries by chapter 384 Acts of 1869.

We therefore finally come to consider the interests and rights of the inhabitants at large, and of the Border owners, in this fishery. Unless these last gave their consent, the pond could not be opened to the sea, and there would be no sea-fish in it; consequently the almost entire value of the fishery depends on the voluntary act of said owners; and the inhabitants at large have no right in the matter. As a matter of fact, the beach would always be opened, during the winter and early spring, from time to time, in order to prevent the washing of the banks of the pond by excessively high water: and it may therefore be admitted that some sea-fishes would come into the pond, even though there were no fishermen to purposely open the beach for them. It would be only to such fishes, coming in, so to speak, accidentally, through a passage made simply for drainage, that the inhabitants at large could lay any claim; and even in this case their claim would be doubtful. But when the beach is opened *expressly* for the entrance of fishes it is plain that the fishery is a purely artificial one, and the persons who lawfully make the opening have a good claim in equity on the fish. It already has been shown that the Border owners are the only persons who clearly have the right to cause the beach to be opened by their commissioners of sewers. Furthermore, the so-called "Fishermen" have, by their agreement in 1861, a certain right in justice, though not perhaps in pure law to participate in the fishery under the said agreement. Now nearly the whole of said "Fishermen" have joined the border owners in petitioning for a lease to said border owners.

To sum up : it seems that Tisbury Great Pond, in respect to its sea-fishery, is to be considered legally by itself, without dependence on other ponds ; that the sea-fishery is dependent on those persons who can legally open the beach ; that these persons are (certainly) the Border owners of the pond, and (perhaps) the body of men known as the "Fishermen ;" that nearly the whole of the border owners and of the Fishermen have petitioned the Commissioners on Inland Fisheries to grant a lease to said Border owners.

The petitioners agree to take measures for the improvement and increase of the fishery under this lease ; by protecting the spawning fish and by giving them certain free days on which no fishing shall take place. This action looks to an increase of the fishery which, according to testimony of old fishermen has declined, one-half for the herrings (alewives) and two-thirds for smelts and bass, while the white perch are nearly destroyed.

Inasmuch as there may be a certain justice in leaving the eel fishery public, and in allowing the claim of the inhabitants at large to a part of such sea-fishes as would come in when the beach was opened simply for lowering the water in the pond, it is plainly proper to make the rent of the pond payable to the town of Tisbury, and in the form of a certain portion of the fish taken ; and it is further advisable to leave the taking of eels with pots and spears free to the inhabitants at large.

A lease of said Tisbury Great Pond or Newtown Pond will therefore be granted to said Allen Look and others, petitioners, for ten years on the following conditions, to wit :—

1. That the lessees shall place at the disposal of the selectmen of Tisbury, for the inhabitants of the town, one-twentieth part of the fish taken by said lessees ; or, in place thereof, such commutation in money as shall be agreed on by and between said selectmen and said lessees.

2. That said lessees shall neither fish nor allow fishing in said pond between Saturday evening at sunset and Monday morning at sunrise, of each week.

3. That the taking of eels with pots and spears shall be free to the inhabitants at large except within forty rods of the artificial opening through the beach, and except between Saturday evening at sunset and Monday morning at sunrise of each week.

THEODORE LYMAN,
E. A. BRACKETT,

Commissioners.

BOSTON, FEBRUARY 10th, 1870.

SIXTH ANNUAL REPORT

OF THE

COMMISSIONERS

ON

INLAND FISHERIES,

FOR THE YEAR ENDING JANUARY 1, 1872.

BOSTON:

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1872.



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Commonwealth of Massachusetts.

REPORT OF THE COMMISSIONERS.

To His Excellency the Governor and the Honorable Council.

The Commissioners on Inland Fisheries beg leave to present their Sixth Annual Report.

The increase and protection of fresh-water fishes excited no interest in this country, until a few years ago. It is true that individuals had occasionally attempted to make fish preserves, and that a certain number of laws were passed; the experiments of Rémy had also been repeated with some success.

But fish culture, as an art, was unknown. Nor was there much definite knowledge of the habits and movements of those sea fishes which frequent estuaries and in-shore regions. Now, all this has changed. There is a general interest in water culture, and important experiments have been conducted to throw light on it. The in-shore fisheries also, have drawn the attention of competent men, who have begun investigations on the causes of their decrease, and on the possible remedies.

The present spirit has risen, as often happens, from a somewhat remote cause. In 1865, the States of New Hampshire and Vermont complained that the shad and salmon, which had once been abundant within their borders, had been cut off by impassable dams at Holyoke on the Connecticut and at Lawrence on the Merrimack. These dams had been in existence for about sixteen years; and the problem of restoring the fish to the upper waters was of course a very difficult one. Two

Commissioners, appointed by order of the legislature to investigate the complaint, reported in 1866 and gave the history of the rivers and of the decline and partial destruction of their fisheries. The report ended as follows:—

“In order successfully to re-stock the two rivers with shad and salmon, it would be necessary that fishways should be built over the dams; that the pollution of the water should be prevented; that New Hampshire should breed salmon; that Connecticut should forbid the use of weirs and gill-nets, and that stringent laws regulating fishing should be passed by the States concerned.” “If the above conditions were complied with, an abundant supply of fish might reasonably be looked for within five years, though they would not be so plenty as when the country was in its primitive state.”

The legislature, satisfied that an attempt ought to be made to restore the shad and salmon to our sister States, ordered the appointment of Commissioners whose duty it should be to cause fishways to be erected over these dams. The company at Holyoke claimed exemption from any such outlay, and was at last sued, and, after losing the case, appealed it to the Supreme Court of the United States, where it has not yet been tried. On the Merrimack, however, fishways were put up. The dam at Lawrence offered quite as great a practical obstacle as the legal impediment at Holyoke. No book and no mechanic could tell exactly how to make a fishway up which *shad* would pass for so great a distance; and it has taken several seasons of experiment to determine the proper model for such a structure.

Meantime, in the six years that have passed, the question, from being a local one, affecting a few dams on a couple of rivers, has broadened into general interest. Commissioners have been appointed for all the New-England States, as well as for New York, Pennsylvania, New Jersey and Virginia. Fish culture on a considerable scale, chiefly among the clupeoids and salmonoids, has taken its place as a sort of industry, the possible increase of such shore fishes as the striped-bass, rock-bass, scup, and tautog, and of the white-fish and lake-trout of the Western lakes, has been discussed, and, this year, the matter has attained such importance, that a commissioner has

been appointed by the United States to investigate the problem in its general form.

The work of the Massachusetts Commissioners has been of five kinds: first and originally to overcome, if possible, the obstructions on the Connecticut and Merrimack; secondly, to furnish, when called upon, plans of fishways, and to see that they are properly constructed over or around dams on rivers and streams where owners are required by law to provide a passage for migratory fish; thirdly, to introduce new fishes, and to make and publish experiments in water culture; fourthly, to investigate the fisheries in salt and brackish water, near the mouths of streams; and, fifthly, to examine and to give advice upon questions coming before the legislative committee on fisheries. In this last duty they have been able to save no inconsiderable sum of money, by speedily settling matters which otherwise would have led to expensive investigations. The Commission during the six years of its existence, has not been a costly one. Of the five men who have held the office, three never took any pay.

Shad hatching was continued this year, at Holyoke, by the Connecticut Commissioners, and many millions of embryos were turned loose. At North Andover, Mr. A. C. Hardy also carried on hatching with the following results:—

[NOTE.—There are a few discrepancies in this Table, but not such as to affect the general result.]

D A T E.	Shad taken.	Males.	Females.	Air at 6 P. M.	Water at 6 P. M.	Weather.	No. of Fish at each Sweep.	Spawn taken.	Time of Hauling Seine.
May 20,	139	54	85	—	—	—	0, 15, 40, 40, 44, .	—	9½, 10½, A.M.; 5, 7½, 9, P. M.
23,	103	69	34	55	58	Clear,	7, 5, 51, 25, 15, .	75,000	11, A.M.; 5, 7, 8, 9, P.M.
24,	90	47	43	66	65	Clear,	0, 30, 20, 22, 10, 8,	50,000	5, A.M.; 7, 8, 9, 10, 11, P.M.
25,	156	103	53	70	65	Clear,	62, 30, 25, 22, 17, .	100,000	7½, 9, 10½, 11½, 12½, P.M.
26,	93	82	11	68	65	Clear,	59, 14, 12, 8, .	20,000	8, 9½, 11, 12, P.M.
27,	71	50	21	50	65	Clear,	25, 16, 18, 12, .	—	5, 9, 10, 11, P.M.
28,	129	87	42	70	65	Clear,	56, 32, 25, 16, .	100,000	8½, 10, 11½, 12½, P.M.
29,	141	94	47	75	65	Clear,	55, 28, 30, 18, 10, .	10,000	8½, 9½, 10½, 11½, 1, P.M.
30,	65	56	9	80	65	Cloudy,	36, 10, 10, 9, .	25,000	8½, 9½, 10½, 11½, P.M.
31,	86	59	27	70	65	Dull,	19, 21, 20, 20, 6, .	100,000	7, 8, 9½, 11, 12½ P.M.
June 1,	130	104	26	75	76	Clear,	6, 31, 26, 11, .	75,000	8, 9½, 11, 12½, P.M.
2,	79	56	23	76	68	Clear,	35, 28, 9, 7, .	100,000	8½, 9½, 10½, 12, P.M.
3,	70	47	23	75	72	Pleasant,	30, 20, 12, 8, .	100,000	8, 9, 10½, 12, P.M.
4,	35	26	9	—	—	Clear,	6, 10, 12, 7, .	50,000	8½, 10, 11, A.M.; 12½, P.M.

June 5,	60	38	22	68	68	Clear,	.	.	25, 15, 12, 8,	.	75,000	8 $\frac{1}{2}$, 10, 11, 12, P.M.
6,	103	90	13	71	70	Clear,	.	.	48, 30, 18, 7,	.	50,000	8 $\frac{1}{2}$, 10, 11 $\frac{1}{2}$, 12 $\frac{1}{2}$, P.M.
7,	117	99	18	75	70	Rain,	.	.	70, 20, 15, 7, 5,	.	125,000	8, 9 $\frac{1}{2}$, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, 12 $\frac{1}{2}$, P.M.
8,	113	96	17	68	72	Clear,	.	.	65, 17, 22, 9,	.	75,000	8 $\frac{1}{2}$, 10, 11 $\frac{1}{2}$, 12 $\frac{1}{2}$, P.M.
9,	120	83	17	58	70	Clear,	.	.	70, 30, 15, 5,	.	150,000	8 $\frac{1}{2}$, 10, 11, 12 $\frac{1}{2}$, P.M.
10,	90	66	24	62	68	Clear,	.	.	40, 20, 22, 8,	.	75,000	8 $\frac{1}{2}$, 10, 11, 12 $\frac{1}{2}$, P.M.
11,	80	60	20	62	70	Cloudy,	.	.	29, 20, 18, 13,	.	75,000	9, 10, 11, 12, P.M.
12,	80	57	23	54	62	Clear,	.	.	40, 20, 12, 8,	.	75,000	8 $\frac{1}{2}$, 10, 11, 12, P.M.
13,	160	137	23	60	68	Clear,	.	.	106, 40, 14,	.	125,000	9, 11, 12, P.M.
14,	90	76	14	65	69	Clear,	.	.	55, 25, 10,	.	75,000	8 $\frac{1}{2}$, 10, 11 $\frac{1}{2}$, P.M.
15,	120	44	26	57	65	Thunder storm,	.	.	80, 25, 15,	.	200,000	8 $\frac{1}{2}$, 11, 12 $\frac{1}{2}$, P.M.
16,	89	74	15	60	65	Clear,	.	.	45, 20, 15, 9,	.	75,000	8 $\frac{1}{2}$, 10, 11 $\frac{1}{2}$, 12 $\frac{1}{2}$, P.M.
17,	82	63	19	56	62	Clear,	.	.	40, 30, 12,	.	125,000	8 $\frac{1}{2}$, 10, 11 $\frac{1}{2}$, P.M.
18,	82	59	23	54	62	Cold storm,	.	.	46, 25, 11,	.	225,000	8, 9 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
19,	44	42	2	54	62	Clear,	.	.	22, 9, 9, 4,	.	-	8 $\frac{1}{2}$, 10, 11, 12, P.M.
20,	41	38	3	58	62	Rain,	.	.	8, 20, 10, 3,	.	-	7 $\frac{1}{2}$, 9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.

D A T E .	Shad taken.	Males.	Females.	Air at 6 P. M.	Water at 6 P. M.	Weather.	No. of Fish at each Sweep.	Spawn taken.	Time of Hauling Seine.
June 21,	44	35	9	48	62	Clear,	18, 16, 6, 4, .	50,000	8, 9½, 11, 12, P.M.
22,	58	43	15	65	65	Clear,	24, 20, 6, 4, .	100,000	8½, 10, 11½, 12½, P.M.
23,	82	65	17	51	62	Clear,	34, 25, 16, 7, .	100,000	8½, 10, 11½, 12½, P.M.
24,	60	41	19	55	63	Rain,	35, 15, 10, .	75,000	8½, 10, 11½, P.M.
25,	115	82	33	60	63	Clear,	33, 30, 20, 17, 15, .	150,000	8½, 10, 11, 12, 1, P.M.
26,	90	58	32	70	65	Clear,	34, 30, 18, 8, .	75,000	8½, 10, 11, 12, P.M.
27,	70	19	51	70	68	Clear,	30, 22, 10, 8, .	75,000	9, 10, 11, 12, P.M.
28,	79	57	22	65	69	Dull, .	40, 23, 10, 6, .	75,000	9, 10, 11, 12, P.M.
29,	75	48	27	60	69	Clear,	45, 20, 10, .	80,000	9, 10½, 12, P.M.
30,	75	59	19	55	70	Clear,	35, 21, 10, 9, .	100,000	9, 10½, 11½, 12½, P.M.
July 1,	63	40	23	60	70	Clear,	36, 18, 9, .	125,000	9, 10½, 12, P.M.
2,	22	16	6	72	70	Cloudy,	15, 7, .	25,000	9, 10½, P.M.
3,	71	42	29	75	70	Clear,	42, 20, 9, .	150,000	9, 10½, 12, P.M.
4,	24	17	7	72	71	Cloudy,	16, 8, .	20,000	9, 10½, P.M.
5,	28	19	9	73	71	Clear,	16, 8, 4, .	50,000	9, 10½, 11½, P.M.

July 6,	44	23	21	74	72	Cloudy,	.	.	32, 8, 4, 0,	.	175,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, 12 $\frac{1}{2}$, P.M.
7,	32	21	11	73	72	Clear,	.	.	21, 11, .	.	75,000	9, 10 $\frac{1}{2}$, P.M.
8,	33	20	13	72	72	Clear,	.	.	27, 6, .	.	100,000	9, 10 $\frac{1}{2}$, P.M.
9,	-	-	-	75	72	Clear,	.	.	-	-	-	-
10,	61	42	19	76	73	Cloudy,	.	.	31, 22, 8,	.	75,000	9, 10 $\frac{1}{2}$, 12, P.M.
11,	64	53	11	66	73	Rain, .	.	.	42, 15, 7,	.	40,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
12,	55	38	17	75	74	Clear,	.	.	38, 12, 5,	.	100,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
13,	13	8	5	76	74	Clear,	.	.	8, 5, .	.	25,000	9, 10 $\frac{1}{2}$, P.M.
14,	25	17	8	70	74	Clear,	.	.	18, 7, 0,	.	75,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
15,	27	20	7	71	69	Clear,	.	.	17, 7, 3,	.	100,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
17,	47	36	11	65	73	Clear,	.	.	33, 10, 4,	.	75,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
18,	27	19	8	64	70	Clear,	.	.	16, 8, 3,	.	30,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
19,	39	31	8	62	70	Clear,	.	.	20, 12, 7,	.	25,000	9, 10 $\frac{1}{2}$, 11 $\frac{1}{2}$, P.M.
20,	27	17	10	60	71	Clear,	.	.	16, 8, 3,	.	25,000	9, 10, 11, P.M.
21,	22	7	15	58	68	Clear,	.	.	16, 6, .	.	20,000	9, 10 $\frac{1}{2}$, P.M.
22,	6	4	2	58	68	Clear,	.	.	6, . .	.	10,000	9 $\frac{1}{4}$, P.M.

The total catch was 4,336 fish. The number of spawn taken, 4,530,000. Of this a large quantity was carried some miles above the Lawrence dam and there hatched. Taking the same period in the last three seasons, the fishery has been as follows :—

1869.	June 10 to July 19,	.	.	1,559
1870.	June 10 to July 19,	.	.	754
1871.	June 10 to July 19,	.	.	2,242

It will be seen that there was an increase this year of three-fold as compared with the last season, and of one-third as compared with 1869.

In the report for 1869 (page 18) it was said in regard to this fishery, "We must look for an increase in 1871 at the earliest and in 1873 at the latest." The increase has come at the appointed time; and what is more remarkable, the shad have come in large numbers directly up to the Lawrence dam,—a thing they have not done for many years. This movement was also foretold for the progeny of the shad put above the dam in 1867. They, however, differed from the alewives in regard to the fishway, which they seemed not eager to enter. This was a disappointment, but may be accounted for by the fact that the shad did not reach the Lawrence dam until the sixth of June, when the river was too low to tempt them up the fishway. Had they appeared earlier, or had there been the usual stage of water, there is good reason to believe that they would have passed freely over. A good deal has, after all, been accomplished in the enterprise.

Although salmon have not been bred in New Hampshire to such an extent as to warrant a considerable return to the river, and although the exact fishway suitable to shad may not yet have been fully determined, it can, on the other hand, be claimed that wise laws and artificial breeding have increased the shad in both rivers, especially in the Connecticut, where the season of 1870 was the best for perhaps half a century; and the past season has also been excellent, so that on the lower river, the price was very much reduced. On the upper river the exceptional scarcity of water kept the fish back,—an effect that always follows a dry season. On the Merrimack the shad have evidently increased, and have, at last, been brought in

numbers to the foot of the dam at Lawrence. The fishway there has, after many experiments, been rendered an excellent one, with a flow of water so regular that all the smaller fishes, together with the alewives, pass up without trouble, and in great numbers. There seems no reason to doubt that proper alterations in the entrance will attract the shad, which have, indeed, already gone up, though in small numbers; and which have also surmounted the Mystic fishway, this season, for the first time.

Fishways have been constructed, during the past season opening up the Ipswich River as far as Topsfield, Indian Head River to Indian Head Pond, and the Neponset as far as Ponkapoag Pond. All the fishways constructed under the care of the Commissioners have been visited and found to be successful. Where they have been built over dams on rivers and streams partially stocked with fish, long enough to warrant any results, a large increase has invariably followed. This has been very marked in the case of Mystic River and its tributaries. The people of Winchester and Medford took an early interest in restocking these waters. As the river is a short one, where experiments could be easily noted, more than usual attention was given to it. Notwithstanding the increasing impurities of the water have destroyed no inconsiderable number of the small fry, the alewives have increased almost beyond calculation, ascending the river in the spring by millions, and, in narrow places, often so plenty as to crowd each other out upon the banks. The importance of a large number of these fish in the ponds that supply Cambridge, Charlestown, Chelsea and East Boston with water, should not be overlooked. The young fish derive their nourishment from feeding on the myriads of animalculæ that otherwise would, in the months of July and August, perish,—and their decay render the water unhealthy. The city of Boston acted wisely in procuring a law to prevent the destruction of fish in Cochituate Lake.

In the summer of 1867 about five thousand young shad, from Holyoke, were turned into Whitney's Pond. A portion of these returned last spring, passing over the small fishway at Mystic dam. In 1868 and 1869 a large number of shad was hatched and turned in at Winchester. The return of these fish may be expected in 1872, 1873 and 1874.

The Sebago salmon procured last year yielded several thousand eggs, which were successfully hatched. The seven fish brought at that time have lived perfectly well in a spring pond of moderate size; which shows how easily this large fish may be availed of for the purpose of culture.

The prevalence of crime is nowhere more evident than in the depredations committed upon those who are interested in fish culture. Of the many persons engaged in this useful industry scarcely one has escaped. In some cases the entire stock of breeding fishes has been stolen. Of the many thefts committed, only one person has been convicted. In the case of the Commonwealth *v.* Charles C. Smith of Waltham, it was shown in evidence that Mr. Charles Winn, a retired merchant residing in Belmont, had constructed a pond and stocked it with trout. The fish were stolen, and Smith was charged with the theft, convicted and fined twenty dollars and costs,—the full extent of the law.

Fish cannot be housed or otherwise protected, and are, so far as exposure and liability to be stolen, the same as cloth on tenter-bars, or hides in process of tanning. A more stringent law is needed to protect those who have invested their time and money in this important enterprise.

The Commissioners beg leave to suggest an appropriation of \$4,000 for the ensuing year.

All of which is respectfully submitted.

THEODORE LYMAN,
E. A. BRACKETT,
THOS. TALBOT,

Commissioners on Inland Fisheries.

S U P P L E M E N T .

[A.]

COMMISSIONERS ON INLAND FISHERIES.

MAINE.

CHARLES G. ATKINS, Augusta.

NEW HAMPSHIRE.

W. A. SANBORN, Weirs.

W. W. FLETCHER, Concord.

T. E. HATCH, Keene.

VERMONT.

M. C. EDMANDS, Weston.

M. GOLDSMITH, Rutland.

MASSACHUSETTS.

THEODORE LYMAN, Brookline.

E. A. BRACKETT, Winchester.

THOMAS TALBOT, North Billerica.

CONNECTICUT.

W. M. HUDSON, Hartford.

ROBERT G. PIKE, Middletown.

JAMES A. BILL, Lyme.

RHODE ISLAND.

NEWTON DEXTER, Providence.

ALFRED REED, Providence.

—— BARDON, Scituate.

NEW YORK.

HORATIO SEYMOUR,	
GEORGE G. COOPER,	
ROBERT B. ROOSEVELT,	New York.

NEW JERSEY.

B. P. HOWELL,	
J. H. SLACK,	Bloomsbury.

PENNSYLVANIA.

JAMES WORRALL,	Harrisburg.
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VIRGINIA.

WILLIAM B. BALL,	Mid Lothian.
ASA WALL,	Winchester.

[B.]

ON THE POSSIBLE EXHAUSTION OF SEA FISHERIES.

THIRD NOTICE.

BY THEODORE LYMAN.

At the session of the Legislature in 1870, there were presented petitions with over 3,000 names, praying for a law to restrict fishing with weirs, seines and gill-nets. The petitioners alleged that many valuable fishes, and notably the Scup (*Pagrus argyrops*), the Tautog (*Tautoga onitis*), the Striped Bass (*Labrax lineatus*) and the Rock Bass (*Centropomus atrarius*), had much decreased in consequence of the use of these engines. On the other side appeared remonstrants, to the number of nearly 8,000 ; chiefly bank or mackerel fishermen, or those engaged with them in trade. After a very tedious and costly hearing, in which the weir men from only a portion of Cape Cod had to pay \$3,000 for legal services, and the like, and in which the time of the Committee on Fisheries was occupied for several weeks, the question was brought up in the Senate, and after an able exposition by Hon. N. E. Atwood, the petitioners had leave to withdraw.* They withdrew, convinced against their will, and of the same opinion still ; and quite resolute to fight their battle over again when the field looked more favorable. There was, indeed, little to sway a looker-on towards either party. The witnesses generally had limited information, coupled with pretty strong prejudices ; and what real information was to be got was violently pulled and twisted by the half-dozen able lawyers engaged by the combatants.

To avoid, in future, such waste of time, money and temper, has seemed to the Commissioners very desirable. The only way to avoid it was to substitute the exact observation of unprejudiced persons for the inconsequent souvenirs of interested witnesses. During the last session (1871) an opportunity occurred for making a start in this direction. Certain inhabitants of Cotuit, a town on

* See Report for 1870, p. 60.

the south side of Cape Cod, prayed the Legislature that a weir at the mouth of Waquoit Bay might be abolished. They alleged that this weir cut off the alewives (*Alosa tyrannus*) when seeking the fresh water of Marshpee River, and of other neighboring streams, in the spring. The hearing proved of the usual kind. None of the petitioners knew much about the weir, but they were sure it was bad, because they got fewer alewives and bass than they used to do, and no scup at all. On the other part, the remonstrants stated that their weir was quite a blessing in disguise, and that it captured only such alewives as did not breed in that neighborhood. In order to get some facts and to make a beginning of reliable statistics, the Commissioners hired this weir, for the season of two months, and stationed a man there whose duty it was to keep a daily record of the fish taken, of the wind and weather, and of the temperature of the air and water. One of the Commissioners visited the weir, from time to time; and important observations were there made by Prof. Agassiz and Dr. Steindachner.

Waquoit Bay (Pl. II. fig. 1) is one of the most singular of the land-locked fiords on the south shore of Cape Cod—an irregular, many-lobed body of salt water, which is rendered in its upper part brackish by fresh streams, and which empties in the sea only through a single very narrow cut in the low sand barrier which shuts out the ocean. The influent brooks, dignified by the names of Quoshnet and Child's Rivers, are of the clear cold water peculiar to that sandy country, which everywhere pours out its springs near the surface. It is these spring brooks and these extensive shallows of salt or brackish water, protected from the ocean and teeming with small crustacea, that render this region so renowned for its trout, which there get a size, fatness and flavor rarely found anywhere else. For similar reasons the alewives here find a proper breeding ground, by passing through the sheltered bay and ascending the brooks to the ponds at their sources. The scup, too, and the striped bass, eminently estuary fishes, delight in the grateful cover and the abundant food.

Here, in Massachusetts of the nineteenth century, there are not to be found many such primitive villages as Waquoit. It is a good twelve miles from the nearest railroad station. No telegraph poles disfigure with their ungainly length its quiet road. The daily mail, proceeding in a one-horse wagon, and going a roundabout course to avoid improper haste, arrives soberly at the little post-office. Every house is well painted and well scrubbed, suggesting the precision and neatness of old whaling captains. These may be seen working in their fields and gardens, or going forth to catch blue-

fish in sail boats,—a sturdy, simple race of men, quiet and brave, like all good seamen. Full of good advice, too. “Remember,” said one of them, “when you are closing to lance a sperm-whale, and he turns and breathes in your face, don’t fail to keep washing it with salt water; there’s nothing will give you sore lips so quick as the breath of a sperm whale!” The landsman who listened to this wholesome counsel assured the ancient mariner, with unmistakable earnestness, that, when he *did* close with a sperm whale, he would look out about the breath.

All the population is American of the English stock. If a man answers not to the name of Phinney, it is tolerably safe to call him Tobey. It seems there was an Irish girl in the village, but she found it so laborious to go all the way to Sandwich to mass, that she departed thence. The only people in the neighborhood not of Saxon blood are the descendants of the autochthonal red men, who now are much mixed with black, and who dwell in the Marshpee reservation. They live by farming, in a small way; and some of them are skilful whalers, rising even to the dignity of “boat-steerers” in that calling.

This seaside village it was, that, thirteen years ago, was disturbed by the erection of a weir on its borders. It came in for its share in the anti-weir movement of 1870, and the following testimony, against it and in its favor, was offered:—

TIMOTHY HATCH (*a witness called on behalf of the petitioners*).

Reside in the east part of Falmouth, near Waquoit. Know something of the trap at Waquoit. It has been set generally about an eighth of a mile from the opening that leads into Waquoit harbor.

A few seasons it has been very close to the opening. I should think that in the first place it led off 200 yards, and then they added on about 150 yards more. They begin in shore and put in a leader, and then put in what they call a bowl. In this case the other leader continues from the outside of the bowl and leads out still farther. I should not think it would vary more than a year or two from twelve years that they have been there. Have been to the weir a number of times when they have been taking fish out. Sometimes they have had quite a large quantity of menhaden, and a variety of other kinds with them. I have seen two quite large boats, which I suppose would hold sixteen or twenty barrels apiece, that were loaded from the weir. These were principally menhaden. Have seen scup, tautog, herring and lots of other fish that were not of much consequence, of which, the principal part were dogfish and skates. Have also seen flounders, sculpins, shad, a cod or two, considerable many squid and some herring. Have not seen young fish—only some small dogfish.

Do not know what the size of the weir is. Should think the mesh was an inch and a quarter square. They generally commence in March to set their

weirs, or as soon as they can get good weather enough to put them down. I am not certain when it yields the most. They generally catch alewives first and then menhaden. I believe they stop generally about the first of June—about the time the blue-fish begin to come plenty.

A few years ago it was pretty profitable. I do not know as to the amount that they received from it.

From fifteen to thirty years ago I could go off at any time, especially just morning or sunset, and catch as many fish as I wanted, perhaps from fifteen to twenty-five or thirty in an hour. I noticed the scarcity of fish about twelve years ago. I ascribe the cause of this diminution to the weirs. Suppose seines in the bay have something to do with it.

Our herring have diminished in our river where we used to get our supply. We have considered the scup fishing in Waquoit Bay very important. They pretend that it is for want of feed that the fish have left, and that it is on account of the ooze which has come there, but I have taken the ooze out of the scup when I have been dressing them. They had eaten it. I can bring proof to show that the ooze has increased in proportion to the decrease of the scup. Nine years ago I could not more than get a wheelbarrow load on the shore, but this last year, in a distance of 125 or 130 yards, I have seen seventy-five horse loads come up at one flow. It has been intimated that the herring in a certain river in our locality have not decreased, and they have an affidavit from one of the owners of one of the ponds that they have caught as many during the last five years as they ever did. But one of the owners told me, six or eight years ago, that they had taken pains to seed that pond more than usual. In the other rivers they have decreased, and they are caught later, or from about the 15th to the last of May.

ABISHAI PHINNEY (*a witness called on behalf of the remonstrants*).

Reside in Falmouth in Waquoit, and engaged in fishing of late years; formerly caught mackerel. The weir is situated at Waquoit. Have had it there twelve years. We set about the 1st of April and take it up the 1st of June. We catch for bait, altogether, for Gloucester fishermen and the mackerel fishers. We stock about \$2,000 a year on the average. Take principally alewives and menhaden. Take a few mackerel, and some tautog and some bass.

For the last seven or eight years I think we might take from 2,500 to 3,000 pounds of tautog during the whole season. The last three years we have not taken a great many of them. All we got of tautog we gave away. Do not ship them at all. It will not pay to ship them. Take a few scup. Last year we caught perhaps two or three barrels. About eight years ago we caught about 200 barrels. Take no young fish unless there may be in the haul some small herring; sometimes shad. The most we get are large fish, and especially alewives. No spawn destroyed by our weir, nor any eatable fish. Suppose the people of Falmouth are the most interested of any in the herring (alewife) fishery. We have always been of the opinion that they (alewives) are of a different kind from those that come into our creek. We calculate they are fish making their passages. Have seen similar ones on the coast of Maine. There is a small portion of them that get into our weirs. There are several brooks

at the head of our bay that herring go into; and for the last eight years one river there has had more herring caught from it than has been caught in it for twenty years before. One reason I suppose is, that they have taken some care of it.

One gentleman told me that he believed that if we had another weir they should catch more. All of our rivers for the last year have had abundance of herring; great many more than enough for the fishermen of the town.

Last year, for the first time, there was a weir put one-quarter of a mile to the west of the mouth of one of the most profitable rivers, and everybody supposed that it would hurt the river,* and I thought perhaps it would myself, from what I had seen of the rivers and fisheries; but when the time came, although they caught a considerable number of alewives in the weir, yet the herring ran up the brook as usual, and there never have been so many herring caught in that brook before as there were last year. There were more last year than the three previous years altogether. There is any amount of testimony to that fact. A man by the name of Powers was at the head of it. They took mostly alewives.

We have a permit from the selectmen for five years. The second year we did not get a permit, but set it without a permit, and afterwards they gave us a permit and taxed us.

There have been a great many herring in Marshpee. They catch a great many and sell a great many. One year, I know, they had twenty-five or thirty barrels over and no sale for them.

They generally come late into Marshpee Brook. Any quantity of menhaden come down through the Sound in schools.

We can fish for menhaden quite early. I think I have seen some spawn in these, but when we come to the school-pogie there is none in them.

Never saw the spawn of blue-fish, although I have seen a good many young fish. The great body of them never deposit their spawn on our shores.

Of striped bass we take perhaps some 200 or 300 a year.

Used to get a great many scup in Waquoit Bay, but there has been a change in the harbor and this green ooze is there, and the fishermen attribute to that, the cause of there not being any more fish there. There are tautog in Vineyard Sound. We take more now than when we first set. Do not know anything about any mussels being washed ashore. The Gloucester mackerel fishermen could not get their bait otherwise than from our weirs in the spring of the year. It cannot be taken in purse-seines. The current is an obstacle, and then there is a great deal of rough bottom, and eel-grass at the bottom. The purse-seine cannot be used in Vineyard Sound. The fish have not schooled at the time they first want the bait. There are large quantities of blue-fish in our bay. Have seen acres of them. The ooze has been coming into the bay for the last ten years. Never saw any spawn in the bass in May or June. Have taken scup out of the body of the blue-fish.

Do not think setting the traps affects our hook fishing. Think the alewives and herring come around the river and they find an obstruction and fall back. The faster the fish run the faster they get into our weir, and we catch them

* Stream leading to Coonemesset Pond.

better on the passage. The men that have this weir are men that have tended these rivers (alewife streams). Do not think there is any difference in the amount of herring in the rivers. In ten years we have caught two sea-trout and one Spanish mackerel.

My personal observation has been mostly on the trout and halibut. These are fishes, the scarcity of which has never been attributed to the weirs, and the trout now are very scarce with us indeed.

The fish which the blue-fish feed on are those which are most plenty,—the menhaden and alewives. Do not think we disturb the spawn of any eatable variety of fish.

“A pound or weir is an old and singular contrivance, whose success depends upon the fatal principle of fishes never to turn a sharp corner. A place is chosen where it is known that large schools are accustomed to coast along parallel with the shore, and there a barrier is run out in a straight line. This barrier is called the ‘leader,’ and may be a stone-wall, a fence of laths or of brush, or a net stretched on poles. At the end of this leader, and like a spear-head on its handle, is constructed a heart-shaped inclosure or ‘pound’ (or ‘heart’) having a narrow opening, on either side, next the point of the leader. On its off-shore end this heart again opens into a circular enclosure called the ‘bowl.’ A school coasting along shore is suddenly stopped by the leader, and immediately the fish turn toward deep water, and swimming parallel with the barrier, pass into the heart, whence there is no escape save by a sharp backward turn, which, as before stated, is against their principle. Therefore they swim round and round and pass into the bowl, where they are left by the tide, or, if the bowl be in deep water, they are hauled up by a net bottom.”* (See Pl. 2, fig. 6.)

Weirs of some kind are spoken of by the first whites as in use among the Indians, and similar engines have been used in Europe from a remote period in history. The *madrague*, employed on the coasts of Spain for the capture of the tunny or horse-mackerel, is only a floating weir with a complex arrangement of hearts and bowls. It was brought to Spain by the Phœnicians, and continued there, and at various points along the Mediterranean coast, until the great incursions of the barbarians and the fall of Rome, when apparently all but the simplest fisheries were destroyed. The Moors, however, revived the great weirs under the name of *almadrabas*, whence is derived the present word *madragues*. In the third chapter of Don Quixote, the blackguard innkeeper mentions, among the disreputable places he has visited, “playa de Sanlucar.” This “beach of Sanlucar” was the location of some of the great

* Report for 1867, p. 11.

tunny madragues, whither came a mob of idlers and thieves to share in the excitement and profit of the annual fishery. At this season it was the custom of the proprietor, the Duke of Medina-Sidonia, to mingle familiarly with the crowd; and hence the obscure Spanish proverb, "*Por atun y ver al Duque*," "For horse-mackerel and to see the Duke," which is equivalent to the English "kill two birds with one stone."

Weirs in this country are, as already stated, made in two ways. Those on the inside of Cape Cod are generally tidal weirs, constructed with entwined brush; while those along the south shore are made with netting, and the same is true of Narraganset Bay, where they are called heart-seines, and on the coast west of the Connecticut River, where they get the name of pounds.

The Waquoit weir is made like many of the same sort. About the middle of March, if the weather permits, the men begin to set the poles which are to support the "lint," as the netting is called. First a row of stout poles, or rather posts, running straight out, is firmly set by a floating pile-driver. The poles stand 15 feet apart, and run directly seaward for 750 feet, to make the first "leader" (Pl. II., fig. 6, g.), which here stops short at the mouth of the "heart" (fig. 6, h.), whose outline is marked out by the same kind of poles set nearer together, to wit, about 10 feet apart. The entrance to the heart is 25 feet wide on each side of the leader, or 50 wide in the whole; but it converges strongly towards its outer apex, so that the entrance to the "bowl" is only seven feet wide. This bowl (fig. 6, i.) is marked out, like the heart, with poles set somewhat close together. Moreover, from its east side projects a sort of lobe 18 feet wide and 36 long (fig. 6, k.), indicated by the five poles which are to support this "pocket" wherein fish may be kept alive. From the outer point of the bowl another row of leader poles is driven, running seaward 450 feet; and, at its extremity, posts are driven for the second heart, bowl and pocket, like the first. Then the lint is carried out in boats and hung on the leader posts. It is composed of a pretty strong net, with a mesh of two and a half to three inches. Along its foot, where are placed the leads of a seine, there is made fast a chain; while along its upper edge runs an inch rope (i. e. an inch in circumference). As the net is passed on alternate sides of the succeeding poles, a round turn is taken with the rope, to hold it in place, while the chain, sinking to the bottom, maintains the lint in an upright position and closes the spaces between the poles (Pl. II. fig. 4). The heart is hung with lint in the same way; but the bowl must be differently treated, for the bowl-net has a bottom as well as sides. It is in fact a great bag, 40 feet

long, 80 wide and 15 or 20 deep, and is hung in an oval of poles, 50 feet long and 100 wide. For this purpose a one and a quarter inch rope runs, like a binding, entirely around the upper edge of the bowl-net (fig. 5), and opposite each pole there is made fast to this rope a head-line (fig. 5, a.) whose other end is attached to the pole. These head-lines suspend the bowl-net, which cannot, however, be held down by chains or weights, because these would make it too heavy to handle when the weir is "hauled." Therefore there are bottom-lines (fig. 5, b.) corresponding to the head-lines, except that they are attached to the lower edge of the bowl-net, whence they pass through a hole in the pole, are brought to the surface of the water, and are there made fast. When, now, the head-lines and bottom-lines are hauled taut and made fast, the bowl-net must be firmly set in position, namely, projecting about five feet above the water, and extending thence nearly or quite to the bottom. It remains only to show how the fish are admitted to the bowl and how the fatal door is closed on them. On either side of the entrance to the bowl stands a post (fig. 3, c.), and, beside it, a long slender pole (fig. 3, d.) attached by rings (fig. 3, f. e.) to the post, but free to run up and down. The lower end of the pole is tied to the lower part of the bowl-net, and by pushing the pole down till it touches bottom, the net is held firmly down; and a gap being left in the side of the net at this point, a free entrance is made for the fish. This entrance is closed by pulling up the sliding poles till they bring the net to the surface of the water.

The weir is "hauled" once a day, and always at slack water, because with a strong tide, running east or west, it is impossible to handle the bottom-lines. The men pull out in two parties; of which one, in a large scow, passes round the outside of the bowl, casting off the bottom-lines; while the other, in a yawl-boat, pushes inside the bowl, pulls up the sliding poles and closes the entrance. The slackening of the bottom-lines allows the bowl-net to hang free; and the crew inside begin to haul up the bottom of this net in such a way as to work the fish towards one corner, letting the net, as it comes to the surface, pass under their boat, which is thus slowly drawn across the bowl towards the corner where the capture is to take place; and where the scow is already waiting outside.

The scene now becomes an exciting one. The menhaden in thousands begin to show the sharp upper lobes of their tails above the water; here and there darts a feverish mackerel, like a blue and silver flash; great leathery skates, looking like pigs rolled out flat, raise their snouts in slow astonishment; here a shark sullenly works his way through the crowding mob; hundreds of goggle-

eyed squid, smothered in the press, feebly ply their force-pumps; and there the murderous blue-fish, undismayed by imminent death, glares fiercely and snaps his savage jaw to the last. All these, with flat-fish, sea-robins, butter-fish, and many more, are shaken and rolled in a fluttering mass iridescent with changing colors, and shower their silver scales high in air. It moves even the weir men in their oil-skin clothes, with a slight excitement, as they cull out from the menhaden the choice and the offal fishes. There is Uncle Abishai smiting sharks with a spear, like so many Sauls, and he smiteth them not twice; and Captain Ed'ard endeavoring with a swift scoop-net to capture a dodging shad, because Mrs. Asa has boarders and needs a fish for dinner; and Captain Charles, with the air of one who gets a toy for a good child, diligently striving after "one of them 'ere striped robins that the Professor wanted." All this is strange and entertaining even to a Commissioner, who by the motion of a long swell and the evil piscatory odor, is somewhat afflicted with what the local satire terms "white-ears." And now the menhaden, bushels on bushels, are scooped all quivering into the great scow; for, a little outside, lies a mackereler, who has just let go her anchor with a rattle, and a boat is pulling in with the skipper, to buy bait. "What yer got?" cries he, in an indifferent tone. "Menhaden," retorts Captain Warren, as if speaking of a new and scarce fish. (*A pause.*) "I don't know but I might take a few berrels, if they was low," says the skipper. (*No reply.*) "What do you want for 'em?" "Eighty-five cents," shouts Captain Warren, and then (*sotto voce*), "I don't believe he's got a scale!" At this answer, the man of mackerel pushes over the tiller and sheers off indignantly; but presently pauses; "Give you sixty-five for seventy berrel." "Seventy-five cents is the lowest," replies Captain Warren. "Call it seventy cents for seventy-five berrel." "Waal! Waal!" And, by this time, the scow is full, and the weir men pull for the vessel, whose numerous crew is ready to hoist the bait on board and salt it down. They stand with knives, barrels and chopping-blocks, and rapidly cut off the heads and tails of the fish and the thin part of the sides, then give a gash in the shoulder, and throw them into the barrel for salting. A mackereler will take as many as 120 barrels of such bait, which is minced fine in a hand-mill and thrown over to toll the fish.

Many years ago, when mackerel were cheap, the younger ones, called "No. 3's," were laboriously chopped up with a hatchet and thrown over as "chum." When mackerel became dear, especially during the war, the No. 3's were too valuable to be thrown away, and cheaper material, such as menhaden, was resorted to.

This vital matter of *bait* lies at the bottom of the weir question. The weirs furnish it in great quantities and early in the season; and they are especially important to the cod fishermen. The cod fishery may be divided into three kinds: 1. The local fishery, which is pursued near the shore to supply the daily market. 2. The Grand Bank and Gulf of St. Lawrence fishery. 3. The George's Bank fishery. The last two are of the greatest importance.

For example, the Gulf and Bank fishery of Provincetown alone, for the year 1868, was as follows:—

Vessels (81 Grand Bank; 10 Gulf of St. Lawrence),	91
Men,	988
Bushels of salt carried,	83,220
Barrels of clam-bait carried,	4,098
Quintals of cod brought back (112 lbs. each),	78,607
Quintals of halibut brought back (100 lbs. each),	15,056
Barrels of oil brought back (of 31½ gals.),	1,609
Ships cast away,	2
Men lost,	8

Gloucester sends a much larger fleet, including many vessels to George's Bank, a fishery which is peculiar, because fresh bait is carried thither, while on the Grand Bank salted clams are used, and in the Gulf of Saint Lawrence fresh herrings or other small fishes are always to be had. The same was true of the Labrador fishery, where they used to seine the capelin (*Malotus*) and the sand-eel (*Ammodytes*). George's Bank is about eighty miles, by the course, east of Cape Cod, and is much frequented for the winter and spring fishing. In February frozen herrings from Newfoundland furnish bait for this fishery; as spring draws on, alewives are procured; and later, menhaden are carried. Forty years ago these pains were not needed, because plenty of herrings could be netted on the Bank itself. These herrings were first taken on the surface of the water; in after years they could only be got by sinking a gill-net ten or fifteen fathoms, and at last they disappeared wholly. Now it is plain that this George's fishery requires fresh bait early in the season, which is supplied by the weirs; at first alewives, from the last of March to the last of April; then menhaden, from the last of April to the first of June. With our present knowledge of the habits of fishes, and our methods of capture, it is not clear how fresh bait could be got, for the George's men and the early mackerelers, without the use of weirs. In the spring, alewives cannot

usually be seined till they get close to the mouth of their brooks; and menhaden do not "school up," that is, crowd close together at or near the surface, until the beginning of summer. As a fact, the purse-seiners do begin so soon as the season allows them; and it was in evidence at the hearing of 1870 that there are fifty purse-seiners in the short distance between Gloucester and Cape Ann. Indeed, it takes many hands, working in many ways, to catch bait enough for our fishing fleet, which may easily be understood when it is remembered that each George's man takes fifteen or twenty barrels for a trip, and makes two or three trips; and that each mackereler lays in from seventy-five to one hundred and twenty barrels, or even more than that.

The object and advantage of weirs in procuring bait and marketable fish have now been set forth, and it remains to examine the charge of undue destruction which has been preferred against them. By combining the testimony of our legislative hearings and that of the Rhode Island inquiry* with the observations made at the Waquoit weir and those conducted by the United States Commissioner,† a good foundation may be laid for future investigation, and it may even be possible to state some facts as highly probable. But let it be said, once for all, that this investigation must go on like any other in science. The day is (or ought to be) long past when people will listen to *a priori* argumentation and attend to the nice weighing of probabilities and guesses. The question of the exhaustion of sea-fisheries is one to be settled only by close and protracted observation, and by collecting and comparing historical matter and oral testimony. Let our seaboard States see to it, then, that these observations be made regularly and for many years to come. Seth Green, in his homely way, said a wise thing: "What we know we get by hard knocks; and what we *don't* know would fill a big book!"

In examining the problem, we must pass from the known towards the unknown. It is, for example, well known that certain fishes in certain places may be exterminated: trout in brooks by over-fishing; salmon in rivers by dams near their mouths; smelts in creeks by poisonous drainage. Again, it is known that certain fisheries, though diligently pursued for centuries, do not exterminate the fish;

* Report of the Joint Special Committee on the Fisheries of Narraganset Bay, 1870.

† Prof. S. F. Baird, with good assistants, and with the aid of several scientific men, has busily investigated the fisheries of Vineyard Sound and neighboring waters, during the summer and early autumn. He has brought together a great mass of information and an excellent collection of fishes. The results of this labor will soon be published; and, meantime, the Massachusetts Commissioners are indebted to him for hearty coöperation and for generous assistance.

such are the tunny fishery in the Mediterranean, and those of the cod, mackerel and herring in northern waters. And now, here is the question: Between a destructive and a not destructive fishery, where is the dividing line? What are to be classed one way, and what the other way? In answer, one is generally treated to a mass of vague generalization. "Fishes are eaten and destroyed in the sea by hundreds of millions, and therefore the tens of thousands taken in fishing cannot affect the total." "Fishes full of spawn are taken at that place by the hundred barrels, and we went fishing near there and could not get a bite, therefore they are diminishing." "Fishes lay millions of eggs, and, if not killed off, the sea would become solid with them; therefore they are not diminishing." "We have known fishes to go away of themselves; and this sort of fish, which is no longer found, must therefore have gone away of itself." And so on with endless *petitio principii*, and "undistributed middle," and every other logical fallacy laid down in Whately! But the cold query ever comes back: What is *known* about it?

The accompanying tables will show what is known, thus far, about one weir, and that not one of the most important; but of interest, because it was charged with injuring a fresh-water fishery.

Table I. shows that the total catch of fish too large to pass a $2\frac{1}{2}$ -inch mesh, for the season of about sixty days, was 333,855; or, say, 5,564 fish a day on the average, along a net wall of 1,375 feet; or, looking on this band along the shore as a sea-highway 1,375 feet wide, then 5,564 passers-by were daily captured. This number does not represent all the marine travellers within that limit, because many fishes doubtless "strike back" and refuse to "lead"; that is to say, instead of following close along the leader and passing into the bowl, they retreat from the net, and, with a sweep, double the whole weir. It also is known that fish, when left many hours in the bowl, often effect their escape. Weir men say of fish that they "lead" best when passing rapidly towards some distant point; and worst when they are moving slowly or uncertainly. Hence they maintain that the alewives taken are chiefly those which are bound for points farther to the northward and eastward; whereas, the schools which enter the streams near a weir proceed with deliberation, and are not led into the trap. Now Table IV. shows that in 1871, of all alewives taken by the weir, $\frac{2}{3}$ were taken *before* April 21; in 1870, $\frac{5}{7}$; in 1859, $\frac{1}{2}$; in 1868, $\frac{2}{3}$; in 1867, $\frac{1}{2}$; in 1866, $\frac{1}{10}$; in 1865, $\frac{1}{11}$. Therefore, in six out of seven years, nearly all the alewives are taken before the last third of April. But the greatest run of alewives *up the streams* usually takes place about the twentieth of May, a full month *after* the chief alewife

fishery is done at the weir. It is a common saying, "the sea-trout run up about the twentieth of May, with the herring." For example: during the past season (1871) there were taken at the Waquoit weir, 50,153 alewives, only 60 of which were captured after April 21. In the little brook leading from John's Pond to Child's River and the head of Waquoit Bay (Pl. II., fig. 1), there were netted 100,000, the great run being May 22, and 50,000 (by estimate) were allowed to run into the pond. Besides which, about 25,000 were taken at the Bourne's Pond fishery, and perhaps as many more in other parts of the bay. If, now, the weir stops a large part of the alewives which seek to enter Waquoit Bay, how comes it (1.) that into a single brook, tributary of the bay, there entered three times as many alewives as were taken at the weir; and (2.) that, at the season when alewives are captured at the weir, few or none are netted in the brook; and *vice versa*? Answer may be made, (1.) that the alewives which entered the brook, passed into the bay early in March *before* the weir was set; (2.) that, once in the bay, they loitered there two months until the temperature and the swelling spawn impelled them to seek fresh water. This latter answer is more or less reasonable; because alewives, when first they enter bays, or salt estuaries, do loiter, and drift back and forth with the tide. Their movements, like those of the sea-trout, seem influenced by the heat of the salt water. Table I. shows that this was 49° to 51° the last third of April; a month later it rose to 58° , then to 60° and then to 62° ; and at this moment (May 22) the chief "run" of sea-trout and alewives took place. The fresh water then encountered by them would vary in temperature; if it were that of a pure spring brook, it would be perhaps 5° below the temperature of the salt water; if it were the drainage of a pond, its temperature might be 10° higher. On the whole, these fishes probably "run up" in the largest numbers when the salt and fresh water are at 58° to 60° . There is, however, nothing to indicate that large schools of alewives passed from the ocean into Waquoit Bay early in March, and before the weir was set; on the contrary, the tables for the last seven years show that from March 17 to 31 the catch is always poor and straggling. At any rate, there is nothing to suggest that 200,000 fish passed into the bay *before* March 24, when the weir took only 50,000 *after* that date. One thing is certain: If the past season was a fair sample, and the weir should always be set in the same way, it would not prevent the proprietors of alewife streams in Waquoit Bay from gathering a good harvest. What remains to be proved by future observation is, whether the season 1871 *was* a fair sample as to the movements of the alewives.

The above views are strengthened by the fact that whereas the weir took only 86 striped bass altogether, a single fisherman with hand line took 75 in a single day, during June, at Poket Point within the bay; and it is estimated that 200 were thus caught in course of the season.

Here it is of interest to glance at the conditions which are necessary to the culture of alewives, and to examine the agencies of destruction at work against them; for this useful fish is taken in quantities which render it important. Most people would be surprised when told that some small streams thus produce, annually, 100 tons of animal food, which is sold at one fiftieth of the price of common beef.

Here is the annual product of two streams emptying into the head of Buzzard's Bay, the one for fifteen, the other for seven years, to which are added for comparison the Waquoit returns from Table IV.:—

YEAR.						Barnstable County.		Waquoit.
1857,	.	.	.	.	.	566,400	—	—
1858,	.	.	.	.	.	516,800	—	—
1859,	.	.	.	.	.	480,000	—	—
1860,	.	.	.	.	.	568,000	—	—
1861,	.	.	.	.	.	540,000	—	—
1862,	.	.	.	.	.	474,400	—	—
1863,	.	.	.	.	.	562,800	—	—
1864,	.	.	.	.	.	804,000	—	—
1865,	.	.	.	.	.	840,000	457,600	408,660
1866,	.	.	.	.	.	632,050	572,800	71,249
1867,	.	.	.	.	.	496,000	367,200	58,814
1868,	.	.	.	.	.	380,000	313,600	35,577
1869,	.	.	.	.	.	420,000	276,800	34,504
1870,	.	.	.	.	.	320,800	258,000	75,472
1871 (about),	.	.	.	.	.	481,000	315,200	50,153
Total,	.	.	.	.	.	8,082,200	2,561,200	734,429
Average,	.	.	.	.	.	538,813	365,885	104,918

The first thing that strikes the observer is the great *variation* of a weir as compared with a stream. Waquoit produces one year 400,000, another 70,000, and another only 34,000; while the streams show a product more steady than that of land crops. One exhibits the extremes of 840,000, 630,000 and 320,000; the other, 572,000, 367,000 and 258,000. The second point is the *small yield* of this weir, which did not produce so much in seven years as the better stream did in the single season of 1865; nor did it produce, during

the past season, one-half as much as Child's River alone, which empties into the very bay whose entrance it was said to bar. Comparing the two streams together, there would be the following series of years from best to worst:—

1865, 1866, 1867, 1871, 1869, 1868, 1870.

1866, 1865, 1867, 1871, 1868, 1869, 1870.

This near correspondence goes to show that the causes of increase or diminution lie chiefly in the sea; because the conditions inland would hardly be likely to agree from year to year; such as the care of the fish, the state of the fishways, the greater or less use of water at the dams by the mill-owners, &c., &c.

All such causes affect the seeding of the alewives. If, for example, the flowage made by a dam is suddenly reduced by a heavy draught of water over the wheels, the eggs, which are laid round the edges and in shoal water, may be left dry; and so may the newly-hatched young, which, as they grow, encounter fresh perils. Vast numbers become the prey of pickerel; some are crushed in turbine wheels, and some are caught in dip-nets for bait or to feed ducks withal. Nevertheless, were the dangers of fresh water the sum of their troubles, a few pairs of alewives would doubtless be enough to keep a stream well stocked. It is, apparently, in the sea, where they remain during late autumn and winter, that the great destruction takes place. To determine this destruction, a comparison has been made of three alewife streams, in different places, and seeded in different ways. The following is the result:—

Stream No. 1. About 17,500 alewives are annually thrown over the dam from the water at its foot. These breed in the ponds above, and their young return to the sea by the mill-sluices. If one-third are females, there would be 5,833. If each lays 250,000 eggs,* there would be 1,458,000,000. Now the annual catch of the river is 208,000; and, if it is assumed that $\frac{1}{3}$ of the fish that enter the river get taken (the dam being a complete barrier to them), then the entire number entering the river each year would be about 250,000. This sum divided by the number of fish put over the dam, to wit 17,500, gives a *return* or crop of 14:1. Or, if the whole annual lay of eggs (1,458,000,000) be divided by the annual return of marketable fish (250,000), it will be seen that only 1 in 5,832 of the eggs returns as a grown fish.

Stream No. 2. About 1,250 alewives are annually carried in a tank and deposited in breeding-ponds some distance above the point of capture. The young have to find their way back through mill-

* Report for 1868, p. 8.

wheels and difficult sluices. Applying the same process of calculation, and there would be 417 females laying 104,000,000 eggs. Of the returning adult fish, nearly all, or say $\frac{9}{10}$, are taken. The annual catch is 40,000, and the annual total return or crop would then be 44,000, which, compared to the 1,250 seeders, would be 35:1; and the eggs laid, being divided by 44,000, show that 1 in 2,363 becomes a grown fish.

Stream No. 3 is a "natural" one, that is, the fish are allowed to run over the dam, four days in the week, by a fishway. The average annual catch, fishing three days in the week, is 538,813, which should represent $\frac{3}{4}$ of the fish coming in the stream. The other $\frac{1}{4}$, or 718,416, are assumed to run into the ponds above the dam. Proceeding with the former calculation, there would be 239,472 females, and these would lay 59,868,000,000 eggs. The total number of fish coming each year into the stream is calculable as 1,257,229, which, compared with the seed fish, is a return of only $1\frac{1}{2}$:1; and would indicate that only 1 in 47,500 of the eggs grow to maturity.

If an average be made of the three streams, the result is as follows:—

Each seed fish (males and females together) sends back 17 grown fish; 1 egg in every 18,565 becomes a grown fish.

In the report for 1867 (p. 15), it was calculated, from wholly different data, that, among shad, 1 in 20,000 of the eggs returned as a marketable fish.

Such calculations must, in the nature of things, be very crude; and yet they show that, whatever points are taken as premises, the conclusion is always similar in character, and is, in brief, this: The reproductive function among animals has two ends: 1. The perpetuation of the species; 2. The supplying of organized material as food. This law is especially illustrated among the fishes, of which the greater part are carnivorous, and indiscriminately devour their own young or that of other species. The ocean is a vast, teeming workshop, crowded with fabrics torn in pieces ere they are half finished, to be converted into other fabrics, which in turn are as rapidly destroyed. The myriad forms of life scarcely take on their embryonic state before they are crushed, and pass, with a power that never dies and never sleeps, into new organisms, which are themselves struck down in the unceasing slaughter. It is a spectacle before which the mind quails!

One thing must be remembered in studying this balance of nature, this equilibrium of reproduction and destruction; and it is, that a very small thing *may* disturb it, or *may not*. The destruction by

man may avail, or may not avail, to spoil the equilibrium. It does so avail with salmon in rivers; it does not avail with cod in the open sea. And, in each case, nothing can determine but patient investigation. Suppose, for example, that of the eggs laid in the pond of stream No. 3, 1 in 100 hatched and passed down as young fry to the sea; that would make 598,680,000 of minnows swimming seaward from that one stream. And might not that six hundred millions attract larger fish to the neighborhood? And if all the alewife streams were stopped (as many have been), would there not be, perhaps, a decrease in the number of large fish to be found in-shore? The rule holds good for all animals—where their meat is, there will they be.

Turn now the inquiry from river fishes to those that inhabit salt water only; and take a representative. The scup belongs to Rimbaud's division of "white fishes" (*Poisson blanc*), that is to say, those which retreat in cold weather to the off-shore depths and return with the warm weather to the shallow water close to the coast. Of this group no representative has been more abundant on the south shore of Cape Cod than the scup. Early in May, they used to make their entry into all the bays and fiords in great multitudes. Their route is not so well made out as it should be, but, according to the best observations, they make their advance through the gap, about fifty miles wide, between Montauk Point on the west, and Gay Head on the east. Where they come *from* is a more difficult question; for the species is plenty as far south as Georgia;* and nobody can say how far south the Vineyard Sound scup retire during the winter. It has been guessed that they go to the edge of the Gulf Stream; and this is as good as any other good guess. The same remarks apply to our shad, which come round Montauk Point, and thence, according to the fishermen's belief,† oblique westward to enter Connecticut River. It is the received opinion that the scup, as they near the shore, "fan out" to the northward and eastward, filling Narraganset and Buzzard's Bays, and Vineyard Sound. J. N. Luce, a very intelligent observer, testified at the legislative hearing of 1870, that scup appeared first at the *west* end of the Vineyard, and coasted its northern shore, passing into the tidal ponds in succession, beginning with Menemsha Bight (see Plate I.) and continuing eastward. The big fish, some weighing two pounds, were in-shore, and the smaller ones out in deeper water. They appeared first at Gay Head between

* Holbrook, p. 175, Pl. XXV., fig. 1.

† Report for 1867, pp. 8, 12, 49.

April 25th and May 10th, and then were full of spawn, but, by the end of June, all the females were shotten; and in August, the tidal ponds were crowded with the young. The first frost was a signal for old and young to leave these ponds; the latter in such vast numbers that whole windrows of them were sometimes thrown back on shore by the surf. Of these big scup in the salt ponds he had seen none since 1865, and he noted a diminution, beginning at the *east* end of the island, as soon as pounds were set in the neighborhood, whence he argued that in their passage eastward they got completely cut off before reaching the extremity.

The scup arrive near Newport from the 10th to the 12th of May; at this season they push their way slowly, sometimes making no more than four miles in a day. They then are said to be "numb," and are thought to be blind. The origin of these absurd notions is the fact that they are full of spawn and are feeling their way cautiously, like most fishes in like circumstances; moreover, the temperature of the water variously affects their movements. When a cold northeaster blows, they hold more in deep water, to the great loss of the trappers. Their mode of entering Narraganset Bay was a subject of dispute. Some of the Saugkonnet trappers—whose interest it was to show that they took the scup *coming out* of the bay—maintained that the fish entered by the west passage, past Point Judith, passed round the north end or across the south end, and coming down the east passage, fell into the traps,* whose mouths were always set to the *north*. The hook-and-line men, however, averred that the scup pushed up both passages at once, and in the middle also, and those that were taken at Saugkonnet were hugging the shore and got set into the traps by the tide. Both views may be correct; but the second one doubtless is, because the singular inroad of young scup, which took place this year and which will presently be spoken of, struck first at Saugkonnet and *afterwards* at Beavertail. It is usually thought that no scup came in through Muskeget Channel, but this, like the rest of the theory, is not well proved. The first specimen was taken at Waquoit, this season, as early as April 25th, and the greatest numbers taken were on May 10th and 13th. The season was peculiarly early, and the first "run" near Newport was on May 3d, which would be a week's difference between these

* A trap is a simplified weir (Pl. II., fig. 2). The bowl is merely an oblong, rectangular pen, of large size; and the fish would immediately escape, did not the fishermen, as soon as a school had entered, pull up the net bottom (a.) and shut them in. A trap therefore requires constantly to be watched. This modification of the *Madrague* is said to be the invention of Benjamin Tallman.

points, not enough, perhaps, for the slow scup to move so far. The dates for appearance for past years (table) suggest that the fish of that part of the coast must strike in through Muskeget Channel.

Within a few seasons, a great change has come over the numbers and movements of the scup. In bays and salt ponds they have become nearly extinct; while in the great channels and near the mouths of the bays they still are found in considerable though diminished quantities. Witnesses disagree as to the exact time when scup began to fall off; indeed, it is not probable that they diminished uniformly and in all places at once. Some aver that a falling off was to be noticed only four or five years after the first traps were set, which would make the year 1850. But most of the testimony goes to show that it was between 1856 and 1866. Certainly in 1860 scup were still plenty at Point Gammon and in Lewis's Bay, near Hyannis. Four causes are alleged for this diminution: 1. Impurities in the water. 2. Want of food. 3. Traps. 4. Blue-fish. As to the first, although gravely put forward by certain witnesses, it is too absurd to be for a moment entertained. The idea of poisoning all the waters of Buzzard's and Narraganset Bays by a few mills and print-works near Providence, Greenwich and Fall River is ludicrous in itself; and it is moreover well known that live fish are found in plenty in close proximity to these very manufactories, and that live clams lie directly in the track of the drainage of petroleum works.* As to want of food, it was stated that the five-fingers (*Asterias*) had destroyed certain great mussel beds, which were feeding grounds. But the dredgings of Prof. Baird, during the present season, have shown, not only that there were vast mussel beds still existing, but that the tautog were no more plenty there than elsewhere; and, moreover, the sea-water was everywhere full of the salpæ, fish eggs, minute crustacea, jelly-fishes, and small worms, which are usually found in such localities. The real perplexities of the question are to be found when the effects of traps and of blue-fish come to be considered. The traps can diminish scup in the way they have been diminished, only under certain conditions, to wit (a.): all the scup must stand in between Montauk Point and Gay Head; because any that advanced through Muskeget Channel would nowhere find enough traps to interfere much with them between Waquoit and Monomoy Point, and therefore they would have continued abundant within these limits, while they would have grown scarce in Vineyard Sound and in the two

* See also Report of Mass. Commissioners for 1865, pp. 18 and 53.

great bays (b.). All, or nearly all, the fish must, as they come in, crowd towards the shore, at certain points, and must pass within 1,200 feet of it, because that is the usual length of the trap leader* (c.). All, or nearly all, these scup must be captured before they have spawned, otherwise the race would be abundantly continued, despite the capture of the parents. Each of these conditions is fulfilled, according to the opponents of traps.

The scup, they say, *do* all stand in as indicated above; they are full of spawn and they encounter a different pressure and a varying temperature, which render them slow and lethargic; and, in this condition, they are swept by tides and eddies against certain points of the shore, or of themselves seek the sunshine in protected nooks and bays, where they are captured by hundreds and thousands of barrels. If, on the contrary, they were let alone, they would soon cast their spawn and then would spread far and wide, as a bottom fish, greedily taking the hook. Under the present system, vast quantities of gravid fish are thrown on the market in May, but in the summer and early autumn it is hard to get any. The trappers admit the chief facts, though not the inference. They agree that the scup come in altogether between the Vineyard and Montauk Point; that they are "numb" and full of spawn at that time, and that during warm spells they stand close in, often seeking quiet coves; while, in cold, easterly weather, they keep off in deeper water. They admit, further, that the quantity taken is very great,† but maintain it is but a small proportion of the whole. They are lame in two ways; in the first place, they could give no reasons, that were tenable, for a diminution which they fully admitted. In the second, they were usually very shy about giving any testimony at all before the Rhode Island Committee. Nevertheless, it does not follow that they have the wrong of it. The question must be answered by a collection and a comparison of *facts*. It is clear, that the scup approaches the shore in a way differing from that of the alewife, a hardy, active fish, which does not spawn till later, and then in fresh ponds. It *may* therefore be that scup will fall *en masse* into a trap, which alewives would under certain circumstances avoid, as has been nearly proved in the case of the Waquoit weir.

* In Plate I., the lengths of the pounds and weirs are exaggerated so as to make them distinct. They are made to project one-half to three-quarters of a mile, whereas one-quarter of a mile would be nearer the truth.

† In 1867, six traps at Saugkonnet Point took 10,000 barrels of scup. Next year, however, by reason of bad weather, they got only about a third as many for the whole season (B Tollinan). In 1870, about 6,000 barrels of scup were taken by the Saugkonnet Point traps before May 16th (D. Church).

The blue-fish theory is an old one, but new in its application to scup. Mackerel and menhaden are, as is well known, driven away by them, but it has always been maintained that scup were too spiny to be a favorite food, and practically were let alone in favor of fatter and less bony prey. The witnesses in the Massachusetts and the Rhode Island investigation were unanimous in their assertion that a scup in the stomach of a blue-fish was a very rare thing; Prof. Baird, however, has found many scup in their maw. It is true that these were usually from scup traps, and the blue-fish may have attacked them simply because they were the only prey at hand. On the whole, it will be perhaps pretty near the truth to say, that, although the blue-fish blindly destroys almost everything that comes in his way, his *main* food is the soft fishes and mollusks, such as menhaden, mackerel, alewives and squid. Scup were abundant when the whites first visited the country, certainly from 1621 to 1642. At some time after this, not yet ascertained, they *disappeared* wholly, and, towards the end of the last century, were not known in our waters. About 1794 they reappeared, and became abundant. In 1864 they decreased very much and are at present comparatively scarce. If now the blue-fish are the cause of scarcity, there ought to be some correspondence in their dates of appearance and of disappearance. They were plenty near Nantucket from 1659 to 1764, when they *suddenly* and totally disappeared, to reappear in 1830. Now it would seem that scup did not reappear till thirty years *after* the blue-fish went away, to wit in 1794, and when the blue-fish came back in 1630, they found scup abundant and lived side by side with them for thirty years, before the latter began decidedly to decrease. It is hardly in accordance with what is seen in nature, to suppose that a cause so active would take so long to act, or that, when it ceased to act, so long a time would be needed to restore the original state of things. And now, in the midst of this theorizing and seeking for evidence, rises a phenomenon which puzzles both parties to the dispute. About the first of June of this year (1871) those trappers at Saugkonnet Point who had kept their netting down until that time, were astounded to find their traps clogged with myriads of "dollar scup," little fish about the size of a Spanish dollar. They were tipped out of the bowls by hundreds of barrelsful. This swarm struck first at Saugkonnet, then at Beavertail; and thence apparently it slowly worked up the bay, so that in July these little scup were schooling round the wharves of Greenwich and Providence. In August they were still among the shallows, and were plentiful in the more eastern waters,

at the extreme head of Buzzard's Bay and in the neighborhood of Hyannis.

The weir owner at Wood's Hole had had his nets established for seven seasons but had never before witnessed this spectacle; and the same sort of evidence was given by other weir men. Benjamin Tallman, in his testimony, already cited, speaks of a large quantity of such little scup taken by a seine in 1864; and of another considerable batch brought up from deep water in a purse-seine, about 1855. It is to be observed that this invasion is nothing but an abundant "late run" of yearling fish, coming in its due season. The army of scup advancing to its spawning grounds in May is preceded by a few skirmishers, and is in two or three divisions, of which the first is usually the most numerous and contains the oldest fish; at an interval of perhaps two weeks there follows the second, and then the third, which is usually fewer in numbers and of smaller individuals. Sometimes, and in some places, the great and the smaller scup come mixed together, and the "runs" are not well defined. As with most schooling fishes, the young scup doubtless come last; and the phenomenon of this year's run had two peculiarities: *first*, it is more abundant by many hundred fold than anything that has been seen since a dozen or fifteen years ago, when all the shallows, in midsummer, were full of these little yearlings; *second*, instead of following the deep channels at the mouth of the bay, the swarm struck directly to the coast on entering, and fell into the traps and weirs which chiefly are there set (Pl. II.). This last is, to be sure, an hypothesis, but will be useful as a guide to future investigation. Mr. Luce, in his testimony, stated that the big scup coasted the shore of the Vineyard, while the smaller ones moved *outside*, in deeper water. In other words, the spawning fish sought their grounds, while those that spawned later, or that were too young to spawn at all, kept in the offing. The yearlings (assuming that they do not carry spawn) would come in and spread over the warm shallows simply to seek food; and this, also, the old fish do *after* they have cast their spawn; only they spread out in deeper water, where they remain till the first frosts warn them to depart from the coast. Should such a view of their movements prove the correct one, the invasion of "dollar scup" would simply be a normal movement of yearlings, which, owing to unusual warmth of water, or for some other reason, struck the first points of land on entering Narraganset Bay, instead of holding to the main central channels. The question would be narrowed down to accounting for their *vast numbers*, so sudden and so unwonted. The anti-trap men jumped

to the conclusion that these little fishes were the progeny of *this* year's (1871) hatch; and accounted for the abundance by the very early appearance of the breeding fish, which stood in by the last of April, whereas they usually do not appear till the tenth or the twelfth of May. Consequently the trappers had not generally their lint on, and the first run, in good measure, escaped capture. But the "dollar-scup" were *last* year's (1870) hatch and not this year's, which, on the first of June, would not be larger than a squash seed. The theory would properly account for an abundance of *this* year's hatch; and, as a fact, the little scup, two or three months old, might be seen in great numbers, during August, feeding close to the shore. If, next year (1872), there should be a great run of two-year-olds (hatch of 1870), and if this run should spread over all the bays, and should be taken by hook and line during the entire season, as of yore, then it might fairly be laid down that the traps were *not* the cause, or not the chief cause, in the diminution of scup. In like manner it might then be said, though with less force, that the blue-fish were not a chief cause of the scarcity of scup; because, although blue-fish have notably diminished these last three or five years, and therefore scup might properly increase, yet the decrease in blue-fish has neither been so great nor so sudden as to warrant a *sudden* increase in scup, such as this would be. And if neither traps nor blue-fish can be convicted, it will only remain to say that the diminution has been one of those changes in the numbers or the location of fishes, for which science can at present give no reason.

That there has been a change of location as well as a diminution is quite apparent; for, whereas thousands of barrels are taken at Saugkonnet Point, along the south part of Aquidneck and at Beavertail, in the upper part of the bay they are nearly extinct. A change, too, there has been in their stay, for, whereas the tautog grounds, all over the bay, were once so infested during the summer by scup that a hook could scarcely be got to the bottom, now they are on the shores during a part of May, and thereafter are seen no more. All this the anti-trap men explain very simply, by asserting that the big scup are practically annihilated each season by the traps, and that the supply is kept up only by the spawn which is shot in deep water before they strike the coast.

The same line of observation and reasoning that has been applied to scup will, with little change, apply to tautog, rock-bass, striped-bass and other "white fishes" and "bottom fishes" whose decrease has been complained of. *Observations*, conducted through several seasons by men of learning and of impartiality, are the only means

to real knowledge in this perplexed question. If the governments of the States of Rhode Island and Massachusetts have any forecast they will see to it that such observations be made.

In this slight sketch, based, as it needs must be, on scanty and imperfect information, I have avoided dogmatic statements and rounded conclusions. I have tried to show the problem in all its crudeness, and to point out, both directly and by implication, the great gaps which must be filled before it can take on a scientific form.

FISHES TAKEN IN THE WAQUOIT WEIR,

APRIL 18 TO JUNE 18, 1871.

[Most of the nomenclature is by Dr. Franz Steindachner; and some notes by Prof. Agassiz are added, marked Ag.]

Labrax lineatus.Syn. *Sciæna lineata* BL.*Labrax lineatus* C. V.—STORER, Fish. Mass. p. 6, pl. i., fig. 4.

Striped Bass.

Only a few taken. This is one of the fishes which are said to have decreased, and whose scarcity is laid to the weirs. In the middle of August, Prof. Baird found the young about three inches long in the salt water near Wood's Hole. The striped *Fundulus* is often mistaken for a baby bass. Like the Bar (*Labrax lupus*) of Europe, our bass affects estuaries and tidal ponds, where many pass the winter on a muddy bottom. They also mount rivers beyond the influence of tide. In salt water they congregate in currents and tide-rips, and, during the warm season, seem to prefer swift water.

Centropristes atrarius.Syn. *Perca atraria* LINN.*Perca varia* MITCH.*Centropristes varius* STORER, p. 10, pl. ii., fig. 4.*Centropristes nigricans* C. V.—DEKAY—HOLBR.

Black or Rock Bass, Mass. Blue-fish., R. I.

Rare in the weir. This is called blue-fish in Rhode Island, and our blue-fish (*Temnodon*) goes by the name of horse-mackerel. The weirs are accused of lessening the numbers of this fish.

Pagrus argyrops.Syn. *Sparus argyrops* LINN.*Pagrus argyrops* C. V.—STORER, p. 49, pl. x., fig. 4.

Scup. Scapaug. Big Porgee.

In 1621, Massasoit entertained his half-famished Puritan visitors with "two fishes, like bream, but three times so big, and better meat."* This was on the shore of Buzzard's Bay, and the fishes can have been nothing else than scup; for the chief is described as having shot them, and no other fish of this sort could have been killed near the shore with an arrow. The Englishmen doubtless meant what is still called in Europe the "common sea

* Mass. Hist. Soc. Coll., vol. viii, 236.

bream,"* whose outline is much like that of our scup. Roger Williams, in his key into the language of the Indians† (1642), says: "Mishcup" (scup), "the bream. Of this fish there is abundance, which the natives dry in the sun, and smoke; and some English begin to salt. Both ways they keep all the year; and it is hoped they may be as well accepted as cod at market, and better, if once known." Plainly this species was plenty in Buzzard's and Narraganset Bays in 1621 and 1642. From 1794 to 1803 the sheep's-head (*Sargus ovis*) is spoken of as common at Compton, R. I., and the southern Cape towns, but scup is not mentioned.‡ This is within the memory of men still living; and one witness, dwelling at Wood's Hole, recollects that, at the beginning of the present century, the scup was shown him as a new fish. It seems, then, that, when the English first landed, scup were plenty, that they afterwards disappeared, and that they reappeared about 1800; and, furthermore, it is known that in our own time they greatly diminished from about 1860. Whether they have had more phases of plenty and scarcity, can only be determined by a diligent search among old records.

Umbrina nebulosa.

Syn. *Sciæna nebulosa* MITCH.

Umbrina alburnus DEKAY.—C. V.

Umbrina nebulosa STORER, p. 46, pl. ix., fig. 4.

King-fish.

Scarce in May and June. During August a considerable number were taken with the hook, to the surprise of the inhabitants, most of whom had never seen such a fish. It has always, as far back as 1833, been reckoned a rare visitor, although stragglers have been taken within Massachusetts Bay. Its abundance this season is only in keeping with the appearance of an unusual number of southern species in the waters on the south shore of Cape Cod. Despite the discussion by several authors, this fish is not yet clearly established as distinct from that called whiting in Charleston, S. C. (*Umbrina alburnus*). Even the distinguished ichthyologist, Dr. Holbrook, seems not to have compared specimens side by side, which must be done before the question can be settled. The king-fish, or southern whiting, is excellent when broiled, and would be a great addition to our summer market. When Charleston was closely blockaded, and fishing was a hazardous occupation, the rebel commandant, who was a *bon vivant*, gave \$100, "Confed.," for a string of whiting.

Otolithus regalis.

Syn. *Labrus squeteague* MITCH.

Johnius regalis BL.—SCHN.

Otolithus regalis C. V.—RICHDS.—STORER, p. 44, pl. ix., fig. 1.

Squeteague. Weak-fish.

Common in June, which is the spawning season. This fish is highly interesting as one of those which has appeared and disappeared alternately

* *Pagellus centrodontus*. See figure in Couch's Fishes of British Islands.

† Mass. Hist. Soc. Coll., vol. iv., p. 224.

‡ Mass. Hist. Soc. Coll., vol. ix., 202, &c.

on our coast. In 1803 it was abundant in Rhode Island,* and very plenty at Provincetown as late as 1820.† In 1832 it deserted Vineyard Sound (and the northern part of the Cape even before that), very soon after the reappearance of the blue-fish.‡ And now, for five or six years, it has grown more abundant, apparently *increasing* as the blue-fish *decreased*, until this season, when the weirs have taken hundreds at a haul.

Hemitripterus acadianus.

Syn. *Cottus acadianus* PENN.

Scorpena flava MITCH.

Hemitripterus americanus C. V.

Hemitripterus acadianus STORER, p. 35, pl. vii., fig. 4.

Yellow Sculpin.

Rare. Belongs to deep water.

Acanthocottus virginianus.

Syn. *Scorpus virginianus* WILLOUGHBY.

Cottus scorpius SCHÆFF.

Cottus octodecimspinosus MITCH.—C. V.—RICHS.

Acanthocottus virginianus GIR.—STORER, p. 28, pl. iv., fig. 2.

Southern Sculpin. Common Sculpin.

Plenty in April; scarce in May; none taken in June. Plainly, the sculpin approaches the shore during April, in large schools, although it is commonly regarded as a solitary fish. On the 20th of April over 500 were captured.

Prionotus lineatus.

Syn. *Trigla lineata* MITCH.

Prionotus strigatus C. V.

Prionotus lineatus DEKAY.—STORER, p. 16, pl. v., fig. 4.

Lined Robin.

Very rare in the weir.

Prionotus palmipes.

Syn. *Trigla palmipes* MITCH., 431, pl. iv., 5.

Prionotus palmipes STORER, Fish. Mass., p. 18, pl. v., fig. 1.

Prionotus pilatus? STORER, p. 20, pl. vi., fig. 1.

Prionotus carolinus CUV. & VAL. in Günther, vol. ii., 192.

Sea Robin.

Very abundant. The question arises, whether the *P. palmipes* and *P. pilatus* are not the same species. The chief difference in Storer is, that the pectoral appendages in *P. pilatus* are *tapering* at their extremities, while they are like a spatula in *P. palmipes*. Our specimens, which are very numerous, all have the spatula-like ends, and the stripes on the second dorsal

* Collect. Mass. Hist. Soc., vol. ix., p. 202, 1803. "Squeterg."

† Atwood.

‡ Storer, Fishes Mass., p. 45.

and on the body are as in *P. palmipes*, while the spot and lines in the first dorsal are as in *P. pilatus*. The ends of the pectoral appendages may be rounded by drying. Again, *P. carolinus* may also be the same. The eggs, which are bright orange, were thrown up in quantities during the last third of May, on the beach of the inner part of Waquoit Bay; and the females still had developed spawn in them.

Lophius piscatorius.

Syn. *Lophius piscatorius* LINN.

Lophius americanus DEKAY.—STORER, p. 101, pl. xviii., fig. 2.

Goose-fish.

Although a most disgusting animal, it must have been often eaten by the Indians, since the bones are found in the shell-heaps.*

Scomber scombrus.

Syn. *Scomber scomber* LINN.

Scomber grex and *vernalis* MITCH.—RICHDS.

Scomber vernalis STORER, Fish. Mass., p. 54, pl. xi., fig. 2.

Common Mackerel.

Very common in May and June on some parts of the coast, but they do not stand in towards Waquoit, and are not taken in large numbers there. The identity of our mackerel with that of Europe, may be considered as pretty well established; and the same remark will very likely hold good for many of our cold-water fishes, such as the cod and herring, together with several of the sharks. Dr. Steindachner pronounces our horse-mackerel (*Thynnus secundo-dorsalis* Storer) to be the true classical tunny of Europe (*Thynnus thynnus*), whose fishery has been so important from ancient times. This is not the only instance of a fish being highly valued in Europe, and despised in this country. The Americans are a people extravagant in their food, and in nothing more so than in their fish.

Pelamys sarda.

Syn. *Scomber sarda* BL.

Pelamys sarda C. V.—STORER, p. 63, pl. xi., fig. 5.

Striped Bonito. Skip Jack.

The season has brought with it many of the usually scarce bonito, a species well known in the Mediterranean and on the Atlantic coast of Spain. Forty were taken at one haul of a weir at Wood's Hole in September.

Temnodon saltator.

Syn. *Gasterosteus saltatrix* LINN.

Scomber saltator BL.

Scomber plumbeus MITCH.

Temnodon saltator C. V.—STORER, Fish. Mass., p. 81, pl. xv., fig. 1.

Blue-fish, Mass. Horse-mackerel, R. I. Tailor, N. J.

Common in June. Its first appearance at Waquoit for the last thirteen years, was as follows: 1859, May 16; 1860, May 15; 1861, May 17; 1862,

* Wyman in American Naturalist, No. xi., 1867.

May 13; 1863, May 15; 1864, May 17; 1865, May 15; 1866, May 15; 1867, May 14; 1868, May 19; 1869, May 17; 1870, May 16; 1871, May 24. For the last five or six years it seems considerably to have decreased; and, during the past season, it has been decidedly scarce, except small ones of two pounds or three pounds. No sea animal of our coast attracts more attention now, than the blue-fish. It is the swift and hungry wolf of the ocean; for whereas many fishes lie in wait for their prey, or seek it with stealth and caution, the blue-fish, with untiring speed and hunger insatiable, furiously pursues it. The charge of a band upon a school of menhaden is like the wild attack of the Huns on a peaceful Roman town! In panic terror the poor menhaden fly, crowding wildly towards the shallows, and even running themselves aground in their distraction, while in their rear press their savage enemies, throwing themselves out of water in their fury, and marking their track by blood and torn flesh. Their object seems as much killing as eating, and it is asserted, on pretty good evidence, that, when gorged with prey, they will cast up the contents of the stomach and begin again. They produce two different effects, *driving away* some fish: diminishing others (as it is asserted), by actually killing them. The fishes that are driven are chiefly the mackerel and menhaden—especially the former—whereas the local fishes are not driven off in a body, although it is quite possible they may be diminished through the destruction of their young. Says the precise Zaccheus Macy, "From the first coming of the English to Nantucket (1659) a large fat fish called the blue-fish, thirty of which would fill a barrel, was caught in great plenty all round the island, from the first of the sixth month (June) to the middle of the ninth month (September), but it is remarkable that in the year 1764 * * * they all disappeared; and that none have ever been taken since. This has been a great loss to us.* Hence we know that the blue-fish were here from 1659 to 1764, 105 years. We further know that they reappeared about 1830, in the same waters. They were therefore absent from Vineyard Sound 66 years. And they have continued there to the present time, 41 years. Their disappearance was sudden and inexplicable; their reappearance was more gradual. They first attracted attention as little fish caught by boys off the ends of wharves; and they did not double Cape Cod in force until 1847.

Peprilus triacanthus.

Syn. *Stromateus triacanthus* PECK.

Stromateus cryptosus MITCH.

Peprilus cryptosus C. V.

Rhombus triacanthus DEKAY.—STORER, Fish. Mass., p. 84, pl. xv., fig. 4.

Butter fish.

Cyclopterus lumpus.

Syn. *Cyclopterus lumpus* LINN.—BL.—CUV.

Lumpus anglorum ALDROV.—WILLOUGHBY.—STORER, Fish. Mass., p. 208, pl. xxxii., fig. 2.

Lump-fish.

Scarce in the weir, though not an uncommon fish in our waters.

* Mass. Hist. Soc. Coll., Vol. iii., p. 159.

Ctenolabrus burgall.

- Syn. *Labrus burgall* SCHÆPF.
Labrus chogset MITCH.
Ctenolabrus chogset C. V.
Ctenolabrus cæruleus STORER, p. 108, pl. xx., fig. 1.
 Perch. Cunner. Nipper. Chogset.

The meshes of the weir were small enough to stop a large chogset, and yet only one or two were captured, which shows how a fish may swarm all along a coast and yet be absent from certain localities. It is the only fish which is admitted on all hands to be as plenty as ever. Perhaps its habit of hugging the rocky shore may protect it from predatory enemies.

Tautoga onitis.

- Syn. *Labrus onitis* LINN.
Tautoga americanus BL.—SCHN.
Labrus tautoga MITCH.
Tautoga nigra CUV. & VAL.
Tautoga americana DEKAY.—STORER, Fish. Mass., p. 110, pl. xx., fig. 2.
 Tautog, Mass. Black-fish or Tautog, Rhode Island.

Great complaint is made of the scarcity of this valued species, both north and south of the Cape, but especially near the mouth of Narraganset Bay, where they are said to be not more than one-eighth as numerous as they were a score of years ago.

In the legislative investigation several witnesses, independent of each other, testified that, about the years 1841 and 1856, there came on a sudden cold in the autumn, which killed tautog, rock bass and other fishes, and they were washed ashore in numbers. The *next* year, in each case, these fish were very scarce indeed; but, in three or four seasons, they gradually regained their numbers. This shows that such fishes are, as Rimbaud says, *local*, and are not the chance off-shoots of great armies of fish which inhabit the deep. In September the tautog often approach the shallows to be safe from the equinoctial storms; but immediately thereafter, as the colder weather begins, they slide gradually downward towards deeper soundings. It is at this moment that they are most exposed. The phenomenon of destruction of fishes by slight changes of temperature is familiar, but difficult of explanation.

Rhombus maculatus.

- Syn. *Pleuronectes maculatus* MITCH., Rep. in part on Fishes of N. Y.
Rhombus aquosus MITCH. CUV. Regne Animal.
Rhombus maculatus STORER. Fishes Mass., p. 204, pl. xxxi., fig. 4.
 Poison flat-fish.

The most common of the flat-fishes in May and June. It does not appear why it is called "poison."

Pseudorhombus melanogaster.

- Syn. *Pleuronectes melanogaster* MITCH. Fish. New York, p. 390.
Platessa oblonga DEKAY (en syn. Nat. Hist. of New York, Part iv., p. 299).
Platessa ocellaris DEKAY, l. c., p. 300.
Platessa oblonga STORER, Fish. Mass., p. 301, pl. xxxi., fig. 2 (en syn. *Pleur. oblongus* MITCH.).
 American Turbot. Flat-fish.

This species is first described by Mitchill after a scarce variety, with both sides of the fish dark-colored. An examination of Mitchill's figures shows that what he calls *P. melanogaster*, is what Storer calls *P. oblonga*; and what Mitchill calls *P. oblonga*, is Storer's *P. quadrocellata*. Common in the middle of June, and a few taken in May.

Pseudorhombus oblongus.

- Syn. *Pleuronectes oblongus* MITCH. Fish. of New York, p. 391.
Platessa quadrocellata STORER, p. 203. pl. xxxi., fig. 3.
 Four-spotted flat-fish.

Quite abundant.

Pleuronectes americanus.

- Syn. *Pleuronectes americanus* WALB.
Pleuronectes planus MITCH.
Platessa plana STORER, Fish. Mass., p. 195, pl. xxx., fig. 2.
 Flounder.

Not common, and comes later than the turbot or the flat-fishes.

Pleuronectes ferrugineus.

- Syn. *Platessa ferruginea* STORER, p. 198, pl. xxx., fig. 4.
 Rusty Flounder.

Phycis americanus.

- Syn. *Enchelyopus americanus* BL.—SCHN.
Phycis americanus DEKAY.—STORER, Fish. Mass., p. 187, pl. xxix., fig. 3.
 Hake.

Rare in the weir.

Gadus americanus.

- Syn. *Morrhua americana* STORER, Fish. Mass., p. 165, pl. xxvii., fig. 4.
 Common Cod.

It is highly probable that our codfish is identical with that of Europe (*Gadus morrhua*).

The following interesting abstract on the Summer cod-fishery of the Loffoden Islands, is by Dr. G. O. Sars, son of the celebrated Michel Sars. It was communicated by Prof. Agassiz:

"It was my intention to continue the investigation of the young of the 'winter-cod,' which I had pursued the previous year. I then showed, that

the fish often considered as a separate species, and known on the north-west coast of Norway by the names of Smaagjed, Tarefisk and Gründfisk, is nothing but the young of the winter-cod. I further observed that the great variations in color are only the effects of different bottom and different food.

"It was my task this year to follow the further development of the Smaagjed during the summer. The conditions were now quite different; for whereas during the winter I could, from a boat or from the beach, easily study my objects, now the fish had retired to the deep water and could only be got by hook and line,—a difficult matter, by reason of the scarcity of bait, for the mussel rocks had been ransacked by the winter fishermen, and herring were not to be had. Beginning on the 20th of May, at a place called Skraaven, I set my line in 20 to 30 fathoms water in the sandy channels of the outer holms, but got only fish too large to be yearlings. I then set in the 'sculls' near the rocks, and took great numbers of small cod, corresponding perfectly with the Tarefisk, and which were colored of a brownish red by the *tare* or rock-weed (*Laminaria*). These sculls are very dangerous to approach, especially in the winter time, and are characterized by a periodic ground-breaker. The sea will appear perfectly tranquil for a time, when suddenly there will arise gently, over the scull, a low, broad pyramid of water, which as gently descends, and again the surface is unruffled. The wary fishermen mark well these upliftings, and keep the boat away from them. Presently you observe that the pyramid has again risen, but with increased size and with smoke curling from its apex; there is a sort of forward pushing motion and a sullen roar, and in an instant the sea rises in a vast, glittering, green bank, capped with devouring foam. With a fearful crash it precipitates itself to the very bottom, leaving a great circle of white froth. Your boat, safe in the offing, is lifted high on a huge wave, and the distant thunder on the beach announces that the great breaker has struck. The hapless boat that gets caught over one of these sculls is dashed in a hundred pieces against the rock bottom. These violent periodic ground-breakers are what attract the Smaagjed, for they wash out the small crabs from their hiding places among the sea-weed, and the young cod, dashing forward with the returning sea, devour them greedily. I thought now I should get plenty of yearlings on the sea-weed ground during the whole season, but I was mistaken. Towards the end of June they almost wholly disappeared from that locality and were captured only near sandy channels. Their color, too, changed from the red-brown of the sea-weed to a fine greenish with silvery sides. In their stomachs were found quantities of Sül (*Ammodytes lancea*: sand eel), which now were approaching the coast, and the tarefisk had evidently left the crustacea to prey upon them. The Sül, less common and important in southern Norway, is abundant on the north-west coast, and is held in high esteem. Although too slender to be captured in nets,* it is taken by a large, coarsely woven cloth, worked by several boats. This cloth is slipped under a school of Sül, and the corners being raised the catch is dumped into one of the boats and piled in heaps on the shore. These heaps are left there without further care, and the mass,

* The Americans, who call it sand-eel or *lant* (English, sand-launce), take it for cod bait with a fine-meshed seine; and the central breadth of such a seine is called a lant-bunt.

half putrid, is accounted good food by the inhabitants, and is also served to animals. The cod are more dainty and will not touch stale fish of any kind.* Therefore the Sül for the fishery are got by digging in the sand where they have buried themselves, and where, at this season, they deposit their spawn. I took in the sandy channels plenty of cod, of one, two and three years; also some very large 'Sülcod,' three feet long, and these I saw were the same as the 'winter-cod,' except that the spawn was but little developed. At this season, also, came the Sei (*Gadus carbonarius*: pollack). It was a singular spectacle to watch the sea mews sitting in solemn lines and in perfect silence along the rock ledges, their heads all at one angle. Suddenly, and as if by common impulse, they would spread their wings, and with a shrill cry hasten towards a foamy surface on the sea. This was occasioned by the Sei, which had rushed to the surface in pursuit of a school of Sül, and the birds were coming to share the prey. Thither, too, came the fishermen and trolled with artificial minnows, taking, strange to say, some cod with their other fish, which shows that cod occasionally are attracted to the surface. Later in the season, the cod refused Sül, which seemed to be because they were in pursuit of the young herrings, then abundant in Vestfjord."

Merlucius vulgaris.

Syn. *Gadus merlucius* LINN.

Merlucius albidus STORER, Fish. Mass., p. 185, pl. xxviii., fig. 2.

Whiting.

Only one specimen taken in the weir. This is the hake of the English, and the *merlu* or *merlan* of the French, a fish common in Europe, and known to the ancient Greeks. Its appearance on our shores is inconstant. After being scarce, it became plenty about 1840, and especially at Provincetown, where it clogged the mackerel nets; after 1847, when the blue-fish rounded the Cape, it grew scarce there, and now is a rare species.

Alosa mattowocca.

Syn. *Clupea mattowocca* MITCH.—DEKAY.

Alosa lineata STORER, Fish. Mass., p. 162, pl. xxvii., fig. 2.

Hickory Shad.

The varied and branching "vessels," on the sides of the head, seen in the species of this genus, are the water system. AG.

Alosa tyrannus.

Syn. *Clupea tyrannus* LATROBE.

Alosa tyrannus DEKAY.—STORER, Fish. Mass., p. 156, pl. xxvii., fig. 1
(not pl. xxvi., fig. 3).

Alewife. Herring (Cape Cod).

There seems no doubt that the figures of Storer's plates are changed about; what he calls *A. cyanoton* would appear to be the large-headed

* Cod, although they insist on fresh fish, prefer their mollusca stale, and a spoiled clam is excellent bait for them.

alewife (*A. tyrannus*), called *gray-back* by fishermen; while the figure marked *A. tyrannus* is certainly not that species, but corresponds well with the *black-belly*, so called, a species which runs into our fresh waters to spawn a little later than the *gray-back*, although to some extent mixed with it.* This *black-belly*, called also *blue-back*, is probably *A. cyanonoton*.

Alosa cyanonoton? STORER, Fish. Mass., p. 161, pl. xxvi., fig. 3 (not pl. xxvii., fig. 1).

Black-belly or Blue-back herring or alewife.

Storer mentions the "Black-belly" under the head of *Alosa tyrannus*, but, as has been shown, it is pretty plainly a separate species, and agrees well with *A. cyanonoton*, which he supposes never comes to fresh water.

Alosa præstabilis.

Syn. *Clupea alosa* MITCH.

Alosa præstabilis DEKAY.—STORER, Fish. Mass., p. 154, pl. xxvi., fig. 2.
Common Shad.

It will be seen in table IV. that in 1868 over 2,000 shad were taken, although the catch is usually quite small. These were what fishermen called spawned shad, that is, without any developed ova in them. Their appearance is irregular. In 1840 there were great quantities of shad gilled in the neighborhood of Monomoy Point, and these may have been such spawnless fish. Possibly such exceptional wanderers may belong to schools which have already spawned, early in the season, in some southern river.

Brevoortia menhaden.

Syn. *Clupea menhaden* MITCH.

Alosa menhaden STORER, p. 158, pl. xxvi., fig. 4.

Brevoortia menhaden GILL.

Menhaden. Hard-head. Moss-bunker, VA. and N. J.

A fish inexhaustible in quantity, but variable in locality. They are specially liable to be chased by blue-fish, which sometimes has the effect to drive them away, and sometimes to drive them for refuge into bays which then become packed with countless myriads of them. They are taken in vast quantities and pressed for their oil, of which there are from one to five gallons in each barrel of menhaden. The pumice is sold to the manufacturers of phosphate manures. The Wood's Hole manufactory uses, when in full operation, from 8,000 to 11,000 tons annually of menhaden. One oil maker produced 142,000 gallons of oil in 1870. At 3 gallons to the barrel, 47,333 barrels would be required; and at 250 fish to the barrel, there would be 11,833,350 fish, which at a pound apiece would make 5,916 tons, nearly equal to the weight of fish sent each month to the London market.

Belone truncata.

Syn. *Belone truncata* LESUEUR.—STORER, p. 136, pl. xxiv., fig. 3.

Billed Eel.

Only two specimens taken in latter part of May. It was common at Wood's Hole in August.

* See Report for 1868, p. 7.

Fundulus pisculentus.

Syn. *Esox pisculentus* MITCH.

Fundulus pisculentus C. V., STORER, Fish. Mass., p. 128, pl. xxiii.,
fig. 3-4.

Mummy-chub. Friar.

Spawns in June. The female in both species is larger than the male, and *F. pisculentus* grows a little larger than *F. majalis*.

Fundulus majalis.

Syn. *Cobitis majalis* ART.

Poecilia majalis BL.—SCHN.

Hydrargyra flavula STORER, p. 131, pl. xxiii., figs. 5 and 6.

Bass-fry.

In June, during the spawning season, the males are so brilliantly colored as easily to be mistaken for another species; on the gill-cover is a great coal-black spot; lines of greenish-blue ornament the sides of the head; the fore part of the belly and throat is orange, and the black spot of the dorsal is surrounded by a bright blue ring. Not taken in the weir, but by hand-net inside the bay. This species and *F. pisculentus* are called "Mummies," and are much used for trout and bass bait.

Anguilla Bostoniensis.

Syn. *Muraena anguilla* SCHÖPF.

Anguilla vulgaris MITCH.

Muraena rostrata LESUEUR.

Muraena bostoniensis LESUEUR.

Anguilla bostoniensis AYRES.—STORER, Fish. Mass., p. 214, pl. xxxiii.,
fig. 1.

Common Eel.

Partly owing to its slender body, which easily passes the meshes of a common net, very few specimens were taken. But, as is well known, this is one of the commonest of our fishes, and swarms in Waquoit Bay.

Acipenser sturio.

Syn. *Acipenser sturio* LINN.

Acipenser oxyrhynchus MITCH.—STORER, Fish. Mass., p. 237, pl. xxv.,
fig. 4.

Sturgeon.

This sturgeon, formerly thought to be American only, is now known to be identical with the common species of Western Europe.

Acipenser brevirostris.

Syn. *Acipenser brevirostrum* LESUEUR.

Acipenser brevirostris DEKAY, 345, pl. 58, fig. 191.

Short-nosed Sturgeon.

This species escaped the researches of Storer, and is not found in his Fishes of Massachusetts. Only one was captured in the weir, and that one, when fresh, was quite black. It is more abundant near New York.

Carcharias (Prionodon) obscurus.

Syn. *Squalus obscurus* LESUEUR.

Carcharias (Prionodon) obscurus MÜLL. and HENLE.—STORER, Fish. Mass., p. 243, pl. xxxvi., fig. 2.

Dusky Shark.

Two specimens, June 12.

Carcharias obscurus M. and H. I only know this species from Waquoit.
—AG.

Mustelus lævis.

Syn. *Mustelus lævis* RISSO.—MÜLL.—HENLE.

Mustelus canis DEKAY.—STORER, Fish. Mass., p. 251, pl. xxxviii., fig. 2, 2 a.

Harbor Shark. Smooth Hound.

This European species is very like *M. vulgaris* of the same country, and has been confounded with it. Whether both species exist with us cannot yet be determined. The females taken had the embryo attached by a placenta, which is the distinguishing mark of *M. lævis*.

Mustelus canis Dekay. This species has never been compared with the *Mustelus lævis* of Europe, with which it agrees in bearing embryos attached to the uterus by a placenta. Our fish is common about Cape Cod, and also found in Long Island Sound.—AG.

Acanthias vulgaris.

Syn. *Squalus acanthias* LINN.

Spinax acanthias CUV.

Acanthias vulgaris RISSO.—MÜLL. and HENLE.

Acanthias americanus STORER, Fish. Mass., p. 256, pl. xxxviii., fig. 1.
Dog-fish.

This is also the European species, but seems not to come there in such great numbers. It penetrates to the Adriatic Sea; is common on the Portugal coast and in Northern Europe. Dr. Günter gives it also as coming from Chili and from Australia, so that it would appear to be one of the most cosmopolite of its wide-spreading family. On the Massachusetts coast, it comes in great schools, and is captured by hook and by net, in vast numbers, for the sake of the oil in the liver.

Acanthias americanus Stor. Our species has never yet been carefully compared with the European *Acanthias vulgaris*. I know it only from Nahant, Cape Cod, Yarmouth and Waquoit, in the months of May and June.
—AG.

Odontaspis littoralis.

Syn. *Squalus littoralis* and *americanus* MITCH.

Carcharias griseus AYRES.—STORER, Fish. Mass., p. 241, pl. xxxix., fig. 1, 1 a.

Odontaspis taurus (Rafinesque) MÜLL. and HENLE.

Gray Shark.

Very common in June.

Odontaspis littoralis Ag. *Squalus littoralis* Mitch. and *Sq. americanus* Mitch. are one and the same species, which is identical with *Carcharias griseus* of Ayres. The genus *Eugomphodus* Gill is entirely superfluous; it is even questionable whether the American *Odontaspis* differs specifically from the European, which is the type of the genus *Odontaspis*. See "Poissons Fossiles." I have not yet had an opportunity of comparing the two. Our *Odontaspis* does not seem to extend south of Long Island Sound. It is not rare about Cape Cod and at Nahant.—Ag.

Carcharodon Atwoodi.

Syn. *Carcharias verus?* AG., Poiss. Foss.

Carcharodon lamia? BONAP.

Carcharias Atwoodi STORER, p. 246, pl. xxxvi., fig. 4.

Man-eater.

Carcharodon verus Ag. *Carcharias verus* Ag., Poiss. Foss. *Carcharodon lamia* Bon. *Carcharodon rondeletii* M. and H. *Carcharias Atwoodi* Stor. That *Carcharias Atwoodi* Stor. is a genuine *Carcharodon* there is not the slightest doubt. I have examined specimens from Cape Cod and Nahant. I can further state with confidence that *Carcharias terræ-novæ* Rich. is a young of the same species. *Lamna caudata* Dekay, is also the same fish(?) so that American specimens have already been described under three names. Though no direct comparison has thus far been made with European specimens, I see no reason for considering them as distinct. I know no species of *Scoliodon* from the Atlantic coasts of the United States.—Ag.

The name *Carcharodon Atwoodi* is left provisionally. The figure of *Lamna caudata* Dekay, differs from this species in having the upper lobe of the tail much the longer, and in wanting the longitudinal ridge at the base of the tail. One specimen only was taken by the weir.

Myliobates Freminvillei.

Black Skate.

Myliobates Freminvillei Lesueur. *Myliobates acuta* Ayres, and *M. bispinosa* Str. are one and the same with *Myliobates Freminvillei* Ls., which is the oldest name given to this fish. The species is common in the bay of Rio de Janeiro. In the male the snout is more pointed than in the female, and there is a horn-like projection above the eye, which is wanting in the females.—Ag.

Over twenty were taken, but only during the month of June. The tail-spine of a "sting-ray" was found by Wyman and Agassiz in an Indian shell-heap near the head of Buzzard's Bay, and may have belonged to this species. Ayres' figure, copied in Storer, pl. xxxix., fig. 4, is very poor.

Raia lævis.

Syn. *Raia lævis* MITCH.—STORER, Fish. Mass., p. 266, pl. xxxix., fig. 2.

Smooth Ray.

Raia lævis Mitch. *Raia ocellata* Mitch. is the young of his *Raia lævis*, and *Raia chantenay* of Lesueur is also the same species. I have never seen

it south of Long Island Sound. In all our species of *Raia*, the males have a more pointed snout than the females, and, besides the claspers, are distinguished from the females by rows of sharp spines upon the upper surface of the pectoral fins.—AG.

Many taken and of large size.

Raia diaphanes.

Syn. *Raia diaphanes* MITCH.—STORER, Fish. Mass., p. 264, pl. xxxix., fig. 1.

Raia eglanteria BOSC. MSS.—SHAW.—DUMERIL.

Clear-nosed Ray. Common Skate.

Raia diaphanes Mitch. *Raia eglanteria* and *Raia americana* Dekay, are identical with Mitchill's *Raia diaphanes*. This species has never yet been carefully compared with the European *Raia Batis*. I have never seen *R. diaphanes* to the south of Long Island Sound.—AG.

Taken very abundantly, especially in April and May.

Raia erinaceus.

Syn. *Raia erinaceus* MITCH.

Raia erinaceus Mitch. (The author is right in writing *erinaceus* and not *erinacea*.) I have this species from Nahant, from Saybrook, and from Waquoit. *Raia maroccana* is identical with our *R. erinaceus*, and if truly derived from the west coast of Africa, would show a wonderful range of this skate.—AG.

The specific difference between this and *R. diaphanes* is chiefly in a lobe which rises from the centre of the under lip, which in *R. diaphanes* makes a regular, flattened curve. When a series of both species is examined, this feature is seen to vary a good deal, and its specific value is worthy of further investigation.

CONTENTS OF THE STOMACH AND CONDITION OF THE SPAWN.

OBSERVED FROM MAY 1 TO JUNE 18.

MENHADEN, . . .	Nothing.
TAUTOG, . . .	Crabs; squid (once).
SCUP, . . .	Small clam; squid.
COD, . . .	Alewives; menhaden; <i>purula</i> ; squid; crabs; small tautog; flat fish.
FLAT, . . .	Small sea clam (<i>M. solidissima</i>); worms; small fish; <i>pyrula</i> ; shrimp; ascidians(?)
PLAICE, . . .	Small fish; shrimp; sea worm; sand eel.
SKATE, . . .	Alewife; menhaden; crabs; squid; flat fish.
DOG, . . .	Menhaden; squid; alewives; crabs.
BASS, . . .	Small "smelt" (<i>atherina</i> ?); English herring.
SHAD, . . .	Small "smelt" (<i>atherina</i> ?) (usually empty).
FLOUNDERS, . . .	Crabs; sea perch; squid; alewives. June 6 and 13, small spawn seen.
STURGEON, . . .	Sea worms.
SQUETEAGUE, . . .	Shrimp; small fish; squid; alewives. May 31, June 14 and 16, large spawn.
MACKEREL, . . .	Usually nothing; jelly fish.
HICKORY SHAD, . . .	Small fish; sand eel.
BUTTER FISH, . . .	Shrimp. Large spawn, May 24.
HAKE, . . .	Squid; flat fish.
BELLOWS, . . .	Shrimp; sand eel; squid.
ROBIN, . . .	Squid. Large spawn, May 23.
HARBOR SHARK, . . .	Menhaden; flat fish; crabs; sea clam.
BLUE-FISH, . . .	Menhaden; squid; alewives. June 13, large spawn.
ROCK BASS, . . .	Squid.
SCULPIN, . . .	Large spawn, May 24 and 25.
GOOSE FISH, . . .	Squid.
YELLOW SCULPIN, . . .	Squid.
BLACK SKATE, . . .	Crabs.

REMARKS ON THE TABLES.

TABLE I. shows the wind, A. M. and P. M.; state of weather; temperature of air, and of the water two feet below the surface; and the number of fish taken daily and for the season. The first seven days were before the lease of the weir by the State. The following key will define the common names of the fishes by their scientific names.

Bass,	Labrax lineatus.
Rock Bass,	Centropriestis atrarius.
Scup,	Pagrus argyrops.
King-fish,	Umbrina nebulosa.
Squeteague,	Otolithus regalis.
Yellow Sculpin,	Hemitripterus acadianus.
Sculpin,	Acanthocottus virginianus.
Robin,	{ Prionotus palmipes.
	{ Prionotus lineatus.
Goose-fish,	Lophius piscatorius.
Mackerel,	Scomber scombrus.
Bonito,	Pelamys sarda.
Blue-fish,	Temnodon saltator.
Butter-fish,	Peprilus triacanthus.
Lump-fish,	Cyclopterus lumpus.
Perch,	Ctenolabrus burgall.
Tautog,	Tautoga onitis.
Plaice, }	{ Rhombus maculatus.
Flat-fish, }	{ Pseudorhombus melanogaster.
Turbot,	Pseudorhombus oblongus.
Flounder,	{ Pleuronectes americanus.
	{ Pleuronectes ferrugineus.
Hake,	Phycis americana.
Cod,	Gadus americanus.
Whiting,	Merlucius vulgaris.
Hickory Shad,	Alosa matowocca.
Alewife,	{ Alosa tyrannus.
	{ Alosa cyanonoton?
Shad,	Alosa præstabilis.
Menhaden,	Brevoortia menhaden.
Billed Eel,	Belone truncata.
Eel,	Anguilla Bostoniensis.
Sturgeon,	{ Acipenser sturio.
	{ Acipenser brevirostris.
	{ Carcharias obscurus.
Shark,	{ Carcharodon Atwoodi.
	{ Odontaspis littoralis.
Dog-fish,	Acanthias vulgaris.

Harbor Shark,	.	.	.	.	.	Mustelus lævis.
Skate, .	.	.	.	.	.	{ Raia lævis. Raia diaphanes. Raia erinaceus.
Black Skate,	.	.	.	.	.
Squid, .	.	.	.	.	.
						Mylobatis Freminvillei.
						Ommastrephes sagitatus.

Several criticisms are called for on the table. In the first place, the keeper, being an ordinary fisherman, of course did not nicely discriminate the species, and mixed several together under the name of plaice, flat-fish, &c. He should have been furnished with a can of alcohol, wherein he could keep samples of doubtful fishes, for identification. Then it was hard to teach the weir men the necessity of counting the offal fishes, because they had been used to pitch them all overboard. However, towards the end of the season, the account was kept with a great deal of regularity. If the experiment were continued another year, all offal fishes should be thrown in the scow and brought on shore, where they could be counted and sorted at leisure. Then some hundreds of alewives should be *marked*, by clipping their fins, and turned loose to see if they were afterwards found in the neighboring brooks. From time to time, one side of the entrance to the heart should be closed, first the west and then the east side, to determine if the fish always come from the west, as is asserted. In looking at the catch of each day, the reader will bear in mind that the weir was never hauled on Sunday, nor on very stormy days; and, furthermore, that the menhaden were sometimes not counted for several days together, because no vessels came along to buy them. When, therefore, he sees, on May 25th, 780, and on May 31st, 40,300, he is not to suppose that no menhaden entered the weir for five days, and that *then* 40,300 were suddenly taken.

In TABLE II. the figures for the first six years are taken from the weir men's books, and are believed to be generally correct, although not minutely accurate. It gives a good general idea of how the army of alewives first comes on the coast; then the menhaden, slightly overlapping them; while the shad and bass, in less force, make, as it were, connecting skirmishers, with their grand guards, between these armies.

TABLE III. gives the march of two species of predatory fish, in contrast to the food fishes of Table II. The footings show that they are very irregular in their numbers and movements.

TABLE IV. shows the four food fishes and two predatory fishes in their gross numbers, as taken early and late in the season.

TABLE V. gives the first appearance each season, for thirteen years, of four species of fish. The blue-fish, although irregular in numbers and movements, are more regular than any in the date of their appearance.

EXPLANATION OF PLATES.

PLATE I. Sketch of Narraganset, Buzzard's and Massachusetts Bays, and of the south side of Cape Cod, to show the number and position of the weirs and traps. These vary from year to year in situation and number, and this sketch does not give them except with general accuracy. They are denoted by little lines with a black dot, like short pins. In order to make them clear, their length is exaggerated, and, on an average, they are represented perhaps from twice to three times as long as they really are.

PLATE II. FIG. 1. Waquoit Bay and its weir; from the United States Coast Survey.

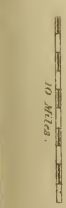
FIG. 2. A trap; *a*, the apron which is hauled up to close the mouth.

FIG. 3. Part of the bowl of the weir next the entrance; *a*, head-line; *c*, post; *d*, sliding pole to haul up the net-bottom and close the entrance; *e*, movable ring; *f*, stationary ring.

FIG. 4. A section of the leader, showing the chain at the bottom.

FIG. 5. A piece of the bowl; *b*, foot-line to haul down the bottom of the bowl.

FIG. 6. The weir in plan on a scale of 200 feet to an inch; *g*, the leader; *h*, the heart; *i*, the bowl; *k*, the pocket, to keep the fish alive when emptied out of the bowl.



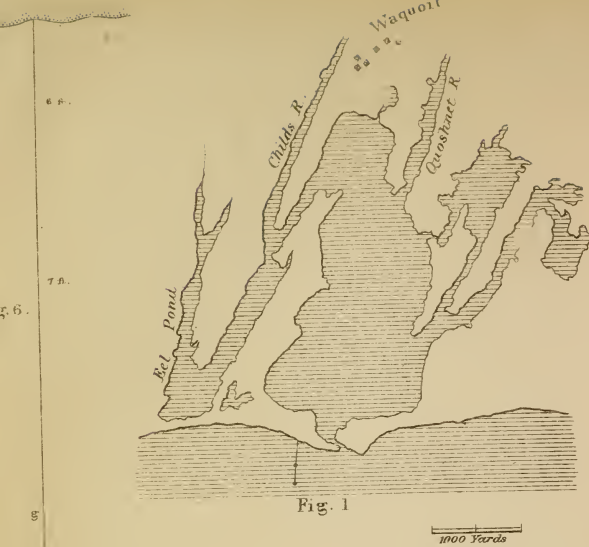


Fig. 1

Fig. 2.

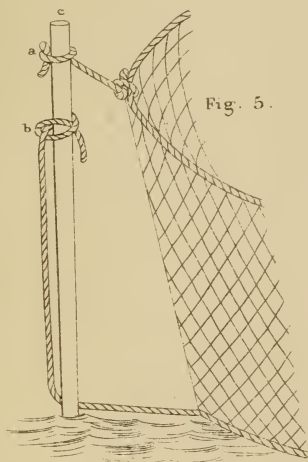
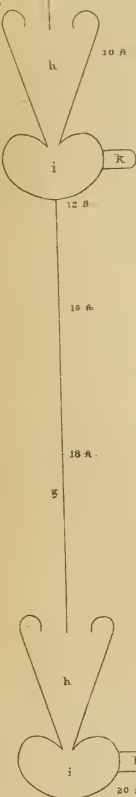
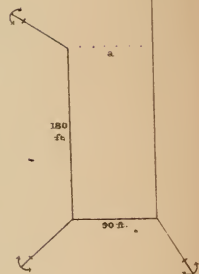


Fig. 5.

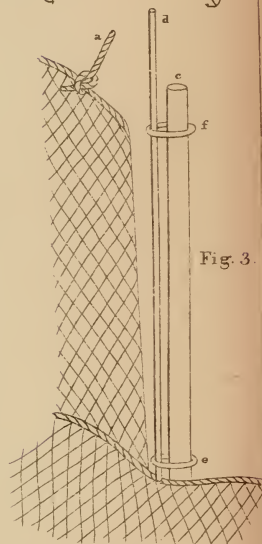


Fig. 3.

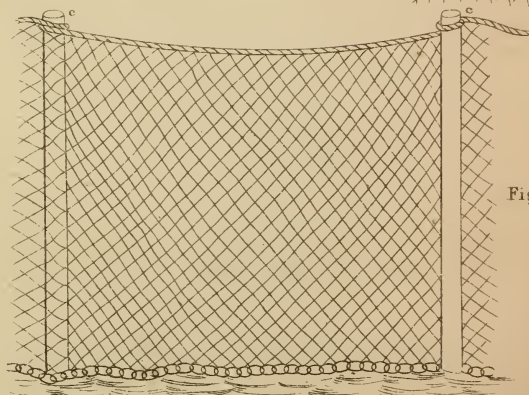


Fig. 4.

TABLE I.—*General Return of the Waquoit Weir for 1871.*

DAY.	WIND.		WEATHER.	TEMPERATURE.		Bass.	Rock Bass.	Scup.	King Fish.	Squeteague.	Yellow Sculpin.	Sculpin.	Robin.	Goose Fish.	Mackerel.	Bonito.	Blue-Fish.	Butter-Fish.	Lump-Fish.	Perch.	Tautog.	Plaice, Flat-Fish.	Turbot.	Flounder.	Hake.	Cod.	Whiting.	Hickory Shad.	Alewives.	Shad.	Menhaden.	Billed Eel.	Eel.	Surgeon.	Shark.	Harbor Shark.	Dog-Fish.	Black Skate.	Skate.	Squid.					
	A. M.	P. M.		Air.	Water.																																								
March 24,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,840	-	-	-	-	-	-	-	-	-	-	-	-				
April 3,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	357	-	-	-	-	-	-	-	-	-	-	-	-	-			
6,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,400	-	-	-	-	-	-	-	-	-	-	-	-	-			
10,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,850	1	-	-	-	-	-	-	-	-	-	-	-	-			
11,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,340	-	-	-	-	-	-	-	-	-	-	-	-	-			
14,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,250	-	-	-	-	-	-	-	-	-	-	-	-	-			
17,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,000	23	-	-	-	-	-	-	-	-	-	-	-	-			
18,	N.W.	S.W.	Fine.	54	50	1	-	-	-	-	-	157	-	-	1	-	-	-	-	-	-	6	314	-	1	-	-	-	-	4,056	11	-	-	-	-	-	-	-	-	-	89	-	-		
19,	E.	S.E.	Cloud.	51	50	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	9	215	-	-	-	-	-	-	-	4,100	5	-	-	-	-	-	-	-	-	-	60	-	-		
20,	S.E.	S.W.	Breeze. Rain.	51	49	68	-	-	-	-	5	550	-	-	-	-	-	-	-	-	22	500	-	-	1	-	-	-	-	2,600	16	-	-	-	-	-	-	-	-	-	200	-	-		
21,	S.E.	S.E.	Clear. Fog.	59	52	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	230	-	-	-	-	-	-	-	2,300	2	6,000	-	-	-	-	-	-	-	-	110	6	-		
22,	W.	S.W.	Cloudy.	69	51	-	-	-	-	-	-	20	-	-	1	-	-	-	-	-	9	568	-	-	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	20	-	-		
23,	W.	W.	Cloud. Breeze.	56	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
24,	W.	N.W.	Clear. Breeze.	55	51	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
25,	S.E.	S.	Clear. Cloud	59	51	-	-	1	-	-	-	4	-	-	1	-	-	-	-	-	6	125	-	-	-	-	-	-	-	30	-	13,300	-	-	-	-	-	-	-	-	-	-	-	-	
26,	N.W.	N.E.	Clear.	63	52	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	197	6	-	
27,	E.	E	Cloud. Breeze.	50	52	1	-	-	-	-	-	3	1	1	2	-	-	-	-	-	11	26	-	-	1	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	132	-	-	
28,	E.	S.E.	Breeze. Rain.	50	51	2	-	-	-	-	3	-	1	-	-	-	-	-	-	-	7	30	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204	20	-	
29,	N.W.	S.E.	Cloud.	54	51	1	-	3	-	-	7	42	5	-	-	-	-	-	-	-	27	64	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	476	80	-	
30,	S.W.	S.W.	Cloud. Clear.	57	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
May 1,	S.E.	E.	Cloud. Clear.	56	52	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	5	103	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2,	W.	S.E.	Clear.	58	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	35	-	-	2	-	-	-	-	-	-	17,420	-	-	-	-	-	-	-	-	-	381	200	400	
3,	S.E.	S.E.	Cloud.	64	54	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	75	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	201	179	2,500	
4,	N.E.	S. to N.E.	Wind. Rain.	44	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	716	220	6,000		
5,	N.	N.E.	Thick. Rain.	56	52	2	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	49	1	-	2	-	-	-	-	-	-	35,920	-	1	-	-	-	-	-	-	-	-	-	-	
6,	N.E.	N.E.	Cloud. Breeze.	48	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162	170	200
7,	W.	W.	Cloud. Breeze.	54	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8,	W.	W.	Cloud. Gale.	56	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-</					

TABLE II.—*Return of Alewives, Shad, Menhaden and Bass, at the Waquoit Weir, for Seven Years.*

		ALEWIVES.						SHAD.						MENHADEN.						BASS.									
		1865.	1866.	1867.	1868.	1869.	1870.	1871.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1865.	1866.	1867.	1868.	1869.	1870.	1871.
March	17, .	-	506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24, .	-	-	-	-	-	1,840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	28, .	-	-	765	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	30, .	-	-	428	900	-	313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	31, .	21,000	-	-	362	2,354	417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
April	1, .	24,096	-	143	420	1,356	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2, .	-	2,199	889	654	734	588	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3, .	21,093	3,913	919	540	608	-	357	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4, .	12,032	4,000	1,220	62	-	663	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5, .	13,050	5,691	2,500	-	-	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6, .	850	2,348	3,000	-	-	2	1,165	6,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7, .	-	5,090	-	-	50	3,259	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8, .	15,050	4,078	1,560	-	50	2,415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9, .	335	-	4,240	-	400	7,000	-	5	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10, .	31,000	1,994	2,380	-	150	-	5,850	-	-	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11, .	43,045	4,330	3,700	-	-	8,050	2,340	1	1	2	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12, .	-	2,530	6,050	-	1,000	4,100	-	-	-	5	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13, .	2,500	5,320	5,400	-	1,500	2,700	-	2	1	10	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14, .	30,090	2,288	-	-	2,000	5,300	13,250	2	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
	15, .	38,050	-	4,560	150	5,000	7,500	-	-	-	22	-	-	14	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
	16, .	-	6,200	-	-	6,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
	17, .	1,270	2,130	4,200	624	4,000	-	7,000	-	2	7	-	-	-	23	-	-	-	-	-	-	1	-	-	-	-	-	-	-
	18, .	23,000	4,000	2,940	2,900	-	-	4,056	1	6	4	-	-	11	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-
	19, .	14,075	4,000	-	-	3,300	4,500	4,100	12	21	-	-	-	5	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-
	20, .	33,074	3,132	2,020	1,225	2,100	4,200	2,600	3	1	8	13	-	12	16	-	-	-	-	-	-	-	-	-	-	-	-	68	-
	21, .	-	4,500	-	2,350	-	2,950	2,300	-	19	-	11	-	14	2	-	-	-	-	-	6,000	-	-	-	-	-	-	-	2
	22, .	17,020	-	6,000	6,000	-	-	-	17	-	36	75	-	-	1	-	-	-	-	-	-	20	-	-	-	-	-	-	-
	23, .	-	3,000	2,900	4,000	3,100	-	-	-	28	24	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24, .	-	-	3,600	4,430	800	-	-	-	-	33	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	25, .	19,030	-	-	800	-	8,025	30	28	-	5	8	-	-	-	-	-	-	-	-	13,300	-	-	-	-	-	-	-	-
	26, .	19,000	-	-	-	-	4,860	-	12	6	28	-	15	30	-	-	1,800	3,000	2,800	-	-	18	-	4	-	-	-	1	-
	27, .	17,000	-	-	4,000	-	3,140	30	33	-	35	51	-	51	-	-	-	3,000	530	-	-	8	-	-	-	-	-	-	-
	28, .	13,000	-	-	3,400	-	3,780	-	15	-	-	31	37	50	-	-	-	-	2,350	-	-	20	-	-	-	-	5	1	-
	29, .	-	-	-	2,700	-	-	-	4	-	87	40	32	60	-	-	400	-	4,350	4,600	15	-	20	-	-	-	2	1	-
	30, .	-	-	-	-	-	-	-	-	-	54	23	76	50	-	-	-	7,100	2,000	2,300	-	-	62	1	5	-	-	-	-
May	1, .	-	-	-	-	-	-	-	25	30	-	19	-	-	-	-	4,000	4,600	1,100	-	17,420	-	3	-	2	-	-	-	-
	2, .	-	-	-	-	-	-	-	85	43	-	50	-	40	-	-	4,000	2,200	2,490	-	-	-	-	-	-	20	-	-	-
	3, .	-	-	-	-	-	-	-	-	35	18	-	-	40	1	-	-	2,000	6,500	-	-	-	-	-	-	26	1	-	-
	4, .	-	-	-	-	-	-	-	20	40	20	440	-	10	-	-	6,500	5,600	3,800	5,250	-	-	4	25	14	-	-	-	-
	5, .	-	-	-	-	-	-	-	300	27	-	-	-	30	-	-	17,000	4,700	-	920	35,920	-	-	-	-	-	-	2	-
	6, .	-	-	-	-	-	-	-	60	-	-	-	121	50	-	-	10,500	-	16,000	3,000	5,360	-	-	-	-	-	-	-	-
	7, .	-	-	-	-	-	-	-	-	33	-	200	108	-	-	-	-	15,430	-	6,600	-	-	-	-	-	-	-	-	-
	8, .	-	-	-	-	-	-	-	30	8	-	90	30	-	-	-	28,080	20,000	2,516	2,300	-	-	-	20	20	-	-	-	-
	9, .	-	-	-	-	-	-	-	-	-	-	130	-	-	-	-	-	-	2,800	-	-	-	-	-	-	-	-	-	-
	10, .	-	-	-	-	-	-	-	6	-	-	-	20	-	3	-	29,610	35,400	-	8,200	10,020	-	-	-	-	-	-	-	-
	11, .	-	-	-	-	-	-	-	-	-	-	30	-	-	-	-	16,900	-	16,600	24,150	16,800	-	-	-	-	-	-	-	-
	12, .	-	-	-	-	-	-	-	-	-	-	76	-	-	-	-	-	4,500	5,000	18,900	14,945	-	-	-	-	-	-	-	-
	13, .	-	-	-	-	-	-	-	-	-	-	76	-	-	-	-	1,000	-	3,200	17,000	16,000	-	-	-	-	-	-	-	-
	14, .	-	-	-	-	-	-	-	-	-	-	150	-	-	6	-	7,800	-	19,760	5,600	45,760	14,200	-	-	-	-	-	-	-
	15, .	-	-	-	-	-	-	-	-	-	-	75	-	-	-	-	-	-	19,240	4,100	-	-	-	-	-	-	-	-	-
	16, .	-	-	-	-	-	-	-	-	-	-	100	-	17	-	-	66,380	98,000	5,500	-	7,300	-	-	-	-	-	-	-	-
	17, .	-	-	-	-	-	-	-	-	-	-	75	-	-	-	-	15,340	-	32,210	6,000	900	-	-	-	-	-	-	6	-
	18, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33,020	-	-	-	-	-	-	-	-	-	-
	19, .	-	-	-	-	-	-	-	-	-	-	175	-	24	-	-	-	27,040	3,880	3,120	57,980	1,280	-	-	-	-	-	-	-
	20, .	-	-	-	-	-	-	-	-	-	-	60	-	5	-	-	-	-	-	2,080	5,720	1,040	-	-	-	-	-	-	-
	21, .	-	-	-	-	-	-	-	-	-	-	90	-	4	-	-	19,760	-	7,500	-	7,600	-	-	-	-	-	-	-	-
	22, .	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	11,700	-	-	-	-	-	-	-	-	-	-	-
	23, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,400	6,000	-	-	-	-	-	-	1	-
	24, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	700	260	16,900	10,000	26,000	10	-	-	-	-	-	-	-
	25, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,700	2,205	-	-	-	-	-	-	-	-	-
	26, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39,700	28,860	780	-	-	-	-	-	-	-	-
	27, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,160	-	21,580	-	-	-	-	-	-	-	-
	28, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	29, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	30, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	31, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65,780	-	-	-	-	-	-	-	-	-	-	-	-
June	1, .	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	46,230	40,300	-	-	-	-	-	-	-	-
	2, .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,840	13,260								

TABLE III.—Continued.
Return of Dog-Fish and Blue-Fish at Waquoit Weir for Seven Years—Concluded.

	Dog-Fish.							Blue-Fish.						
	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1865.	1866.	1867.	1868.	1869.	1870.	1871.
May 5,	—	—	—	—	—	—	162	—	—	—	—	—	—	—
6,	—	—	100	—	—	—	—	—	—	—	—	—	—	—
7,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9,	—	—	—	—	—	—	988	—	—	—	—	—	—	—
10,	—	—	—	—	—	—	307	—	—	—	—	—	—	—
11,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12,	1,500	—	—	—	—	—	—	—	—	—	—	—	—	—
13,	—	—	—	—	—	—	1,026	—	—	—	—	—	—	—
14,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15,	—	—	—	—	1,000	—	—	100	—	—	—	—	—	—
16,	—	—	—	—	—	—	—	—	—	—	—	—	14	—
17,	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18,	—	—	700	—	500	—	—	—	—	—	—	—	25	—
19,	—	—	—	—	1,000	—	—	—	—	—	—	—	—	—
20,	—	—	800	—	500	—	6	200	—	15	—	—	—	—
21,	—	800	2,000	—	—	—	—	—	—	—	—	100	—	—
22,	—	—	—	—	—	—	50	—	—	—	—	—	—	—
23,	—	200	200	—	—	—	25	203	—	—	230	—	—	9
24,	—	200	100	—	—	—	3	270	—	400	—	160	—	—
25,	—	—	—	—	—	—	1	67	—	300	200	—	—	—
26,	—	—	—	—	—	—	2	62	—	—	200	—	—	—
27,	—	—	—	—	—	—	—	161	—	—	150	295	—	11

[illegible]

TABLE IV.

Consolidated Returns of Alewives, Shad, Menhaden, Bass, Blue-Fish and Dog-Fish, at Waquoit Weir, for Seven Years.

ALEWIVES.

	1865.	1866.	1867.	1868.	1869.	1870.	1871.
March 17 to April 20,	323,610	63,749	46,914	7,837	30,604	52,717	47,793
April 20 to May 29,	85,050	7,500	11,900	27,680	3,900	22,755	2,360
Total,	408,660	71,249	58,814	35,517	34,504	75,472	50,153

SHAD.

April 8 to 20,	26	33	63	13	7	62	56
April 20 to May 15,	645	269	340	1,642	439	523	30
May 15 to 31,	-	-	-	400	-	-	38
Total,	671	302	403	2,055	446	585	124

MENHADEN.

April 21 to May 15,	175,300	213,730	82,680	45,706	66,680	152,590	136,005
May 16 to June 2,	35,800	104,780	121,060	79,020	79,030	255,340	99,265
Total,	211,100	318,510	203,740	124,726	145,710	407,930	235,270

BASS.

April 14 to 20,	.	.	.	35	—	—	—	—	—	—	69
April 21 to May 15,	.	.	.	81	7	111	65	25	51	—	10
May 15,	.	.	.	10	—	18	—	—	—	—	7
Total,	.	.	.	126	7	129	65	25	51	—	86

BLUE-FISH.

May 14 to 31,	.	.	.	1,526	7	1,127	940	840	39	—	85
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DOG-FISH.

April 9 to May 6,	.	.	.	373	3	101	—	1	2	—	2,382
May 7 to 31,	.	.	.	1,500	1,200	3,800	—	3,000	500	—	2,408
Total,	.	.	.	1,873	1,203	3,901	—	3,001	502	—	4,790

TABLE V.

Days of first appearance of Alewives, Scup, Blue-Fish and Menhaden, at Waquoit Weir, for Thirteen Years.

	Alewives.	Scup.	Blue-Fish.	Menhaden.
1859,	April 7,	May 5,	May 16,	May 6.*
1860,	3,	2,	15,	4.
1861,	1,	April 27,	17,	1.
1862,	Mar. 30,	May 10,	13,	6.
1863,	29,	8,	15,	2.
1864,	28,	6,	17,	5.
1865,	29,	1,	16,	1.
1866,	April 2,	8,	15,	7.
1867,	Mar. 28,	4,	14,	3.
1868,	30,	10,	19,	15.
1869,	31,	7,	17,	10.
1870,	28,	2,	16,	8.
1871,	24,	April 25,	24,	April 21.

* Dates when first plenty.

[C.]

OPINION OF THE SUPREME JUDICIAL COURT FOR THE COMMONWEALTH IN THE CASE OF THE COMMISSIONERS ON INLAND FISHERIES *v.* HOLYOKE WATER POWER COMPANY.

[To be printed in Volume 104 of the Massachusetts Reports.]

The provision of the Rev. Sts. c. 44, § 23, and Gen. Sts. c. 68, § 41, declaring that acts of incorporation shall be subject to amendment, alteration or repeal at the pleasure of the legislature, reserves to the legislature the authority to make any alteration or amendment of a charter granted subject to it, which will not defeat or substantially impair the object of the grant or any rights vested under it, and which the legislature may deem necessary to secure either that object or other public or private rights. After a manufacturing corporation, chartered with authority to construct and maintain a dam across a river, paying damages to the owners of fishing rights above, and whose charter does not expressly exempt it from maintaining the dam without a fishway and is subject under the Rev. Sts. c. 44, § 23, and Gen. Sts. c. 68, § 41, to amendment, alteration or repeal at the pleasure of the legislature, has paid such damages, and constructed the dam without a fishway, so as to destroy the fishing rights above, and to impair fishing rights below, for the injury to which last no compensation has ever been made or provided, that corporation, or any other which purchases its dam under the authority of a subsequent statute, may be constitutionally required by the legislature to construct a fishway in the dam to the satisfaction of commissioners appointed for the purpose.

GRAY, J.* The material facts of this case, as appearing by the report of Mr. Justice Colt, before whom the hearing was had, are few and simple.

The defendants, under the authority conferred upon them by their charter, St. 1859, c. 6, are the owners by purchase of a dam across the Connecticut River, and the locks and canals connected therewith, at Holyoke in this Commonwealth, erected by the Hadley Falls Company in accordance with its charter, St. 1848, c. 222, and kept up ever since, for the purpose of creating and maintaining a water power for manufacturing and mechanical purposes.

The charter of the Hadley Falls Company provided that it should pay such damages to the owners of fishing rights then existing above the dam which it was thereby empowered to construct, as might be assessed by the county commissioners, and that either party might apply to them "to ascertain and determine the damages to said fishing rights," and might appeal from their assessment

* The chief justice did not sit in this case, and it was argued before all the other judges in June, 1870.

to a jury, as in the cases of laying out highways. St. 1848, c. 222, §§ 4, 5. And such damages were duly assessed and paid.

It was admitted that, before this dam was built, shad were accustomed to pass up the Connecticut River beyond, as far as Turner's Falls, and were of value to citizens of the Commonwealth, being private owners of riparian fishing rights, for sale as food, and were a source of income to such riparian proprietors upon the river, both above and below the dam; and that the dam prevented the passage of fish up the river, and destroyed the fishing rights above.

It was found at the hearing, that, since the building of the dam, the number of shad in the river below had gradually decreased from various causes; and that a small, but appreciable, portion of such decrease was due to the maintenance of the dam, which prevented the fish from passing up to their former spawning grounds above, and to some extent caused them not to return to the river after their annual passage to the sea. But it did not appear that any owners of fishing rights below the dam had ever claimed damages on this account.

The plaintiffs, as commissioners on inland fisheries, appointed by the governor and council, and pursuant to the authority conferred on them as such commissioners by the Sts. of 1866, c. 238; 1867, c. 344; and 1869, c. 384, § 2; after due notice to the defendant corporation, examined its dam, and determined the mode in which a fishway should be constructed therein, suitable and sufficient, in the opinion of the commissioners, to secure the passage of salmon and shad up the river and over the dam in their accustomed seasons. Such a fishway would cost about thirty thousand dollars, and, as was proved at the hearing, would not diminish the water power of the defendants except when they may desire to add to the present height of their dam by flashboards. The commissioners furnished the defendants with a plan and specification of such fishway, filed a copy of the same in the office of the secretary of the Commonwealth, and required the defendants to build and complete a fishway in accordance therewith, or to agree with the plaintiffs for the construction of such a fishway. But the defendants refused and neglected for thirty days to comply with this request, upon the ground that they were not required by law to do so, and that the Commonwealth had no power or right to command or require them to build such a fishway. The plaintiffs thereupon, in their own names, but in behalf of the Commonwealth, and in accordance with the St. of 1869, c. 422, filed this bill in equity to compel the construction of such a fishway.

The defendants contend that the statutes of the Commonwealth, under which they have been required to make this fishway, are inoperative and void, because they impair the obligation of the contract contained in the charter from the Commonwealth to the Hadley Falls Company (whose rights the defendants have), and so contravene that article of the Constitution of the United States which prohibits the States from passing any law impairing the obligation of contracts. The question to be determined therefore is, What was the contract between the Commonwealth and the Hadley Falls Company? This question must be answered by the application, to the charter of that company, of well settled principles of constitutional law, and of the construction of statutes, which it will be convenient to state, before proceeding to a particular consideration of the terms of this charter.

In England, where the powers of the legislature are unfettered by a written constitution, and no act of a prior parliament can abridge the power of a subsequent one, there could be no doubt of the authority to pass a statute requiring the owner of any dam to erect and maintain such fishways as commissioners appointed for the purpose might prescribe. 1 Bl. Com. 90, 160, 161. *Hodgdon v. Little*, 14 C. B. (N. S.) 111, and 16 C. B. (N. S.) 198. *Rolle v. Whyte*, Law Rep. 3 Q. B. 286, 306.

In the United States, it has been settled for more than half a century, by the decisions of the supreme court, that a grant or charter from a State legislature is a contract, within the meaning of the article of the Constitution which declares that no State shall pass any law impairing the obligation of contracts. *Fletcher v. Peck*, 6 Cranch, 87. *Terrett v. Taylor*, 9 Cranch, 43. *Dartmouth College v. Woodward*, 4 Wheat. 518. In a still earlier case, Chief Justice Parsons, delivering the judgment of this court, clearly stated the true rule, saying: "We are satisfied that the rights legally vested in this, or in any corporation, cannot be controlled or destroyed by any subsequent statute, unless a power for that purpose be reserved to the legislature in the act of incorporation." *Wales v. Stetson*, 2 Mass. 143, 146.

But no act of the legislature is to be declared invalid by the courts, as a violation of a paramount and controlling article of the Constitution, unless the repugnancy between the two is manifest and unavoidable. When a statute has been passed with all the forms requisite to give it the force of law, it must be regarded as valid, unless it can be clearly shown to be in conflict with the Constitution. *Fletcher v. Peck*, 6 Cranch, 87, 128. *Dartmouth Col-*

lege v. Woodward, 4 Wheat. 518, 625. *Norwich v. County Commissioners*, 13 Pick. 60.

In this country, as in England, every grant from the sovereign power is, in case of ambiguity, to be construed strictly against the grantee and in favor of the government. The rights of the public are therefore not to be presumed to have been surrendered to a corporation, except so far as an intention to surrender them clearly appears in the charter. The grant of a franchise from the Commonwealth for one public object is not to be unnecessarily interpreted to the disparagement of another. *Charles River Bridge v. Warren Bridge*, 11 Pet. 420, 544-548. *Perrine v. Chesapeake & Delaware Canal Co.*, 9 How. 172, 192. *Richmond, Fredericksburg & Potomac Railroad Co. v. Louisa Railroad Co.*, 13 How. 71. *Cleveland v. Norton*, 6 Cush. 383, 384. *Boston v. Richardson*, 13 Allen, 146, 156. It is upon this principle that it has been held that a general authority to lay out highways will not warrant the laying out of a highway over navigable waters; that a charter for the construction of a turnpike or railroad from one place to another will not authorize the grantees to obstruct an existing highway, unless such obstruction is necessary to give a reasonable effect to the statute; and a grant of land covered by tide water does not affect the power and duty of the legislature to protect the public rights of navigation and fishing over it. *Commonwealth v. Coombs*, 2 Mass. 489. *Wales v. Stetson*, Ib. 143. *Springfield v. Connecticut River Railroad Co.*, 4 Cush. 63. *Commonwealth v. Alger*, 7 Cush. 53.

As was said by Chief Justice Shaw, in *Commonwealth v. Essex Co.*, 13 Gray, 239, 247: "It is plainly within the province of the legislature to determine and regulate the use of all common and public rights and easements. The rights of navigation on tide waters, and of the use of streams not navigable for boats and rafts, are public, and such rights are subject to regulation. It sometimes happens that the full enjoyment of two public rights would, to some extent, interfere with each other; as where a highway, turnpike or railroad crosses a navigable or boatable stream. It is then for the legislature to determine which shall yield, and to what extent, and whether wholly, or in part only, to the other; and such questions will ordinarily be determined by the legislature, according to their conviction of the greater preponderance of public necessity and convenience."

By the law of Massachusetts, the erection and maintenance of a mill-dam to raise a water power for manufacturing and mechanical purposes is doubtless a public use, for which private property and

rights may be taken, making due compensation. *Hazen v. Essex Co.*, 12 Cush. 45. *Commonwealth v. Essex Co.*, 13 Gray, 249, 250. *Talbot v. Hudson*, 16 Gray, 417, 422. But the right to have migratory fish pass, in their accustomed course, up and down rivers and streams, though not technically navigable, is also a public right, and may be regulated and protected by the legislature in such a manner, through such commissioners or other officers, and by means of such forms of judicial process, as it may deem appropriate; and every grant of a right to maintain a mill-dam across a stream where such fish are accustomed to pass is subject to the condition or limitation that a sufficient and reasonable way shall be allowed for the fish, unless cut off by express provision or obvious implication in the grant. This is settled by a series of cases, and was indeed admitted by the learned counsel for the defendants at the argument. *Stoughton v. Baker*, 4 Mass. 522. *Commonwealth v. Chapin*, 5 Pick. 199. *Vinton v. Welsh*, 9 Pick. 87. *Commonwealth v. Alger*, 7 Cush. 98-101. *Commonwealth v. Essex Co.*, 13 Gray, 247-250.

The legislature of the Commonwealth, before the granting of the charter of the Hadley Falls Company, had declared that every act of incorporation, passed since the 11th of March, 1831, should "at all times be subject to amendment, alteration or repeal, at the pleasure of the legislature," with a proviso that no such act, containing an express limit of its duration, should be repealed, unless for some violation of the charter, or other default. This statute, first introduced into the general legislation of the Commonwealth by St. 1830, c. 81, and reenacted in the Rev. Sts. c. 44, § 23, and the Gen. Sts. c. 68, § 41, has been as much a part of all charters since granted as if inserted therein; and was manifestly adopted with the intention of reserving for the future a fuller parliamentary or legislative power than would otherwise be consistent with the effect to be allowed to the special terms of particular charters, under the judicial construction of the constitutional prohibition against impairing the obligation of contracts. The extent of the power reserved by such an enactment has been the subject of some diversity of judicial opinion, and a definition of its extreme limit is not necessary to this case. It is sufficient now to say that it is established by adjudications which we cannot disregard, and the principles of which we fully approve, that it at least reserves to the legislature the authority to make any alteration or amendment in a charter granted subject to it, that will not defeat or substantially impair the object of the grant, or any rights which have vested under it, and that the legislature may deem necessary to secure either that object or other public or private rights.

Under such a clause, for instance, the legislature may make the stockholders of an incorporated bank liable for the future debts of the corporation. *Sherman v. Smith*, 1 Black, 587; *S. C. nom. In re Lee & Co.'s Bank*, 21 N. Y. 9. It may vary the measure, and thus enlarge the proportion, of the profits which a mutual life insurance company is required by the terms of its charter to pay to a charitable institution. *Massachusetts General Hospital v. State Assurance Co.*, 4 Gray, 227. Railroad corporations may be compelled, by general or special laws, to make changes in the level, grade and surface of the road-bed, new structures at crossings of other railroads or of highways, or station-houses at particular places, in a manner, and to be enforced by forms of process, different from those provided for or contemplated by the original charter, or the general laws in force when that charter was granted. *Roxbury v. Boston & Providence Railroad Co.*, 6 Cush. 424. *Fitchburg Railroad Co. v. Grand Junction Railroad & Depot Co.*, 4 Allen, 198. *Commonwealth v. Eastern Railroad Co.*, 103 Mass. 254. *Albany Northern Railroad Co. v. Brownell*, 24 N. Y. 345; overruling *Miller v. New York & Erie Railroad Co.*, 21 Barb. 513, cited for the defendants.

In the light of the principles thus established, we proceed to examine more particularly the provisions of the charter of the Hadley Falls Company.

The first section creates the corporation "for the purpose of constructing and maintaining a dam across the Connecticut River, and one or more locks or canals in connection with the said dam; and of creating a water power to be used by said corporation for manufacturing articles from cotton, wool, iron, wood and other materials, and to be sold or leased to other persons and corporations, to be used for manufacturing or mechanical purposes, and for the purposes of navigation;" and declares that it "shall have all the powers and privileges, and be subject to all the duties, liabilities and restrictions, set forth in the thirty-eighth and forty-fourth chapters of the Revised Statutes." The second section authorizes the corporation to hold real estate of a certain value, and limits the amount of its capital stock. The next two sections are as follows:

"SECTION 3. Said corporation is hereby authorized and empowered to construct and maintain a dam across said river at South Hadley, at any point between the present dam of the Proprietors of the Locks and Canals on Connecticut River and the lower locks of said proprietors, and of a height sufficient to raise the water to a point not exceeding the present level of the water above said last mentioned dam.

“SECTION 4. Said corporation shall pay such damages to the owners of the present fishing rights existing above the dam which the said company is herein empowered to construct, as may be awarded by the county commissioners of the counties in which said rights exist.”

By section 5, “The Hadley Falls Company, or any of the owners of said fishing rights, may at any time apply to said county commissioners to proceed to ascertain and determine the damages to said fishing rights ;” and on such application, the county commissioners, after public notice and hearing, “shall determine and award the damages to the said fishing rights, within sixty days from the application to them for that purpose ; subject, however, to an appeal to a jury from such assessments, in the same manner, and with like proceedings, as in cases of assessments of damages by county commissioners for land taken for highways ; and all expenses accruing under such application to and determination of the county commissioners shall be borne by the Hadley Falls Company.”

By section 6, “for the purpose of reimbursing said corporation, in part, for the cost of keeping said locks and canals in repair, and tending the same,” it is authorized, with the consent of the Proprietors of Locks and Canals on Connecticut River, to charge tolls on merchandise, boats and rafts.

No express authority is given by this charter to maintain a dam without a fishway. Its terms and provisions do not preclude the inference that the legislature contemplated the construction of a dam with a suitable passage for fish, so as not unnecessarily to impair the public right in that regard ; and that, if the corporation should not make proper fishways, they might be compelled to do so by more specific legislation. The assessment of damages to fishing rights previously existing above the dam is quite as consistent with a partial interruption and injury of those rights, as with their utter destruction. The legislature may well have thought that a dam across the Connecticut River, with any kind of fishway which could be made, would to some extent interfere with the passage of fish, and injure the fishing rights above. But it is admitted that the dam, as actually constructed and maintained, has utterly destroyed those fishing rights. No provision whatever is made for compensation for injuries caused, by the construction and maintenance of the dam, to fishing rights in the river below. The fact that the owners of such rights have not claimed such damages, or were not even aware of the injury done to them, affords no reason why the legislature, upon being satisfied, by larger knowledge or scientific inves-

tigation, that there are such rights, of value to the public, requiring protection, should not legislate accordingly.

The scope and effect of this statute, and the extent of the contract thereby made between the Commonwealth and the corporation, may be best seen and understood by comparing it with the legislation in the *Case of the Essex Company*, 13 Gray, 239, upon which the defendants principally rely to sustain their defence.

The original charter of the Essex Company, besides making it a corporation, and authorizing it to construct and maintain a dam across the Merrimack River, with provisions substantially corresponding to those contained in the first three sections of the charter of the Hadley Falls Company, expressly required the Essex Company to "make and maintain, in their dam so built by them across said river, suitable and reasonable fishways, to be kept open at such seasons as are necessary and usual for the passage of fish;" and provided that such fishways should be made to the satisfaction of the county commissioners. St. 1845, c. 163, §§ 5, 7. The Essex Company accordingly constructed the dam with a fishway to the satisfaction of the county commissioners. In 13 Gray, 250, the court guardedly abstained from expressing an opinion upon the question, "whether, if the fishways actually provided had proved wholly unfit and inadequate to their purpose, and other measures could be provided within a reasonable cost, which could be shown to be probably effectual, the legislature could, by further legislation, have required the company to construct such other fishways."

By the St. of 1848, c. 295, the Essex Company was authorized to increase its capital stock, upon the express condition that "said company shall be liable for all damages that shall be occasioned to the owners of fish rights, existing above the said company's dam, by the stopping or impeding the passing of fish up and down the Merrimack River by the said dam;" that such damages should be assessed by the county commissioners, and, if either party should be dissatisfied with their assessment, by a jury; and that nothing in the seventh section of the original charter should be deemed or taken as a bar to any claim for such damages. This act was made subject to acceptance by the corporation, and was duly accepted; and in accordance with it large sums of money, amounting to more than twenty-five thousand dollars, were paid by the Essex Company to various owners of fish rights above the dam, as damages for hindering or impeding the passage of fish by the dam with such fishways.

In that case, the court, taking into consideration the facts, (offered to be proved by the corporation, and therefore regarded by

the court as having the same bearing as if actually proved,) that, at the time of the passage of the second act, the dam had been in operation some time, with the fishway prescribed, and had proved to be unsuitable or insufficient to accomplish the proposed purpose of providing for the passage of the fish; and also considering that the legislature, in passing it, acted both in behalf of the public and in behalf of all those riparian owners whose fish rights would be damnified by the defendants' dam; held that that act, having been so passed by the legislature and accepted by the corporation, constituted a contract, which exempted the latter from the obligation of making and maintaining a suitable and sufficient fishway, and which had been executed on the part of the corporation by the payment of a large sum of money to the parties whose fish rights were injured, and was binding on the Commonwealth; and therefore the legislature could not, either under the general power to protect and regulate the fisheries, or under the power to alter, amend and repeal charters, afterwards require the corporation to do the acts which, by the terms of the contract so made and performed, it had been exempted from doing.

In the *Case of the Essex Company*, the corporation had built a fishway in its dam, as required by the legislature, and to the satisfaction of the county commissioners, and had afterwards been granted an enlargement of its charter, upon the consideration that it should pay the damage caused to the owners of fishing rights by the dam as already built, with a fishway known to the legislature to be insufficient; it did not appear that any fishing rights below the dam were injured; and the court expressly assumed that the corporation had indemnified all parties damnified in their several fisheries; and, under those circumstances, held that the right to maintain the dam with the existing imperfect fishway had been paid for and had vested in the corporation, and that the contract between the Commonwealth and the corporation, thus executed, could not be afterwards impaired without violating the Constitution of the United States.

But in the case at bar, it not only appears that there are fishing rights below, which are injured by the dam, and for the injury to which no compensation has ever been made or provided; but no fishway whatever has been constructed; and the legislature has never, before passing the statute now sought to be enforced, exercised the power of defining what fishway the defendants should make; nor has it ever authorized or approved, by any expression or implication, the construction or maintenance of a dam without a

fishway. In all these respects, this case differs from that of the Essex Company.

The other cases cited for the defendants are equally unavailing to support their position. In *Central Bridge v. Lowell*, 15 Gray, 106, the St. of 1843, c. 50, declaring that the sum of ten thousand dollars was a portion of the cost of the original bridge not yet reimbursed and repaid to the proprietors under their original charter, and, together with the expense of rebuilding the bridge, should constitute the capital stock of the bridge corporation, which it was held could not be afterwards repealed by the legislature, had been made subject to acceptance, and had been actually accepted, both by that corporation and by the city within whose limits the bridge was, and thus constituted a contract between the city and the bridge corporation; and it was also in amendment of a charter which had been granted in 1824, and which therefore was not subject to alteration, amendment or repeal at the pleasure of the legislature.

In *Boston & Lowell Railroad Co. v. Salem & Lowell Railroad Co.*, 2 Gray, 1, the plaintiffs' charter, which was held to constitute a contract between them and the Commonwealth that no other railroad should be authorized to be made from Boston to Lowell, contained an express provision to that effect, and no reservation of power to the legislature, except to regulate the tolls, and was granted before the enactment of the general provision upon that subject in the St. of 1830, c. 81. So in *Commonwealth v. New Bedford Bridge*, 2 Gray, 339, the decision that a charter to build a toll-bridge over navigable waters, with draws of a certain width, was unconstitutionally infringed upon by a statute requiring the corporation to make draws therein of a greater width, was put upon the grounds that the width of the draws had been expressly prescribed by the charter, that the bridge had been built accordingly, and that no power had been reserved in the charter, or by the general laws in force when it was granted, to alter, amend or repeal it.

The cases in which a railroad corporation has been held by this court to be entitled to recover compensation from another railroad corporation, authorized by subsequent statute to cross its track, were decided upon the ground that the legislature manifested no intention by the second charter to alter, amend or repeal the first, and on considerations similar to those upon which it had been previously held that a charter to construct a railroad was not to be presumed to authorize the taking either of land or easements belonging to the Commonwealth, without compensation. *Commonwealth v. Boston & Maine Railroad*, 3 Cush. 107, 113. *Old Colony*

& *Fall River Railroad Co. v. Plymouth*, 14 Gray, 155. *Grand Junction Railroad & Depot Co. v. County Commissioners*, Ib. 553.

The decisions of the supreme court of the United States in *McGee v. Mathis*, 4 Wallace, 143, and *Von Hoffman v. Quincy*, Ib. 535, related to the power of taxation; and in each of them there was a specific clause of exemption or benefit in the original legislative act, upon the faith of which contracts had been executed between the corporation and third persons. It is well settled by a series of decisions of the same court that a legislative exemption from taxation is not to be inferred without most explicit words. *Providence Bank v. Billings*, 4 Pet. 513, 524. *Philadelphia & Wilmington Railroad Co. v. Maryland*, 10 How. 376. *Christ Church v. Philadelphia*, 24 How. 300. *Thomson v. Pacific Railroad Co.*, 9 Wallace, 579.

It only remains to consider the cases, cited for the defendants, which have arisen in the State of Connecticut.

In *Enfield Toll Bridge Co. v. Hartford & New Haven Railroad Co.*, 17 Conn. 40, it was held that a charter granted by the legislature of Connecticut in 1798, to build and maintain a toll-bridge for one hundred years, or until the expenses of its construction and maintenance should be reimbursed, with a proviso that no person or persons should have liberty to build another bridge within certain limits on the same river, constituted a contract, the obligation of which was impaired by granting to a railroad corporation the right to erect a bridge within those limits, to be used exclusively for railroad travel, and over which the railroad corporation should not permit any other passing. Upon that case it may be remarked, 1st. It does not appear that any power of altering or amending the original charter had been reserved by the legislature; 2d. The charter of the bridge company contained an express stipulation that no other bridge should be authorized to be built at that place; 3d. The judgment that the bridge or viaduct of a railroad corporation was such another bridge is in direct conflict with the recent decision of the supreme court of the United States in *Bridge Proprietors v. Hoboken Co.*, 1 Wallace, 116.

In *Washington Bridge Co. v. State*, 18 Conn. 53, the original charter of the bridge company, which fixed the width of the draw in the bridge, and which was held to be violated by a subsequent act requiring them to make a draw of greater width, reserved a power of regulating the bridge and tolls to the legislature, only in the event, which had not come to pass, of the corporation having been reimbursed the moneys expended in building the bridge, with

interest thereon at the rate of twelve per cent. annually; and the intermediate act of the legislature, accepted by the corporation, which was held by the court not to affect the original provision as to the width of the draw and to leave those whose rights of navigation might be impaired to such remedies as the law had provided, relieved the corporation from some burdens, and made their grant exclusive for a certain distance upon the river, besides providing that nothing therein contained should be so construed as to impair the rights, privileges and immunities of persons using and navigating the river.

The case of *Hartford Bridge Co. v. East Hartford*, 16 Conn. 149, 17 Conn. 79, and 10 How. 511, upon which much stress was laid by the defendants, was as follows: In 1808, the general assembly of Connecticut passed an act, incorporating the Hartford Bridge Company, and authorizing it to build a bridge across the Connecticut River between the towns of Hartford and East Hartford, to the satisfaction of commissioners appointed by the assembly, and to take tolls thereon; and providing that "whenever the said tolls shall reimburse to said company the sums advanced by them in building said bridge, and the expense of lighting, maintaining and repairing said bridge, and of collecting the toll, with an interest of twelve per cent. per annum on the same, the said bridge and the rate of toll shall be subject to such regulations and orders as the general assembly shall think proper to make;" "that nothing in this grant shall now or at any future time in any way lessen, impair, injure or obstruct the right to keep up the ferries established by law between the towns of Hartford and East Hartford;" "and also that the grant may receive such alterations from time to time by the general assembly as experience may evince to be necessary or expedient." The bridge company accepted this charter, and built the bridge to the satisfaction of the commissioners. In 1818, the bridge having been carried away by a flood, the legislature passed an act providing that when it should have been rebuilt by the corporation to the satisfaction of the same commissioners, the ferries before mentioned (the privilege of keeping one-half of which had been in 1783, by the act separating East Hartford from Hartford, granted to East Hartford "during the pleasure of the assembly") should be discontinued; and the bridge was rebuilt accordingly. The general assembly by subsequent acts declared so much of the act of 1818 as provided for the discontinuance of the ferries to be repealed. The supreme court of Connecticut held that the act of 1818 was constitutional and valid as against the

town of East Hartford ; but, by a majority of the court, that the act which undertook to repeal so much of that act as discontinued the ferries was unconstitutional and void, as impairing the obligation of the contract between the State and the bridge corporation, contained in the act of 1818 ; and that the act of 1808, upon a comparison of all its provisions, restrained the legislature from making any regulations materially affecting the prescribed revenues of the corporation until it should have been reimbursed as therein provided. Upon a writ of error sued out by the town of East Hartford, the supreme court of the United States affirmed the judgment, upon the ground that the decision in favor of the validity of the act of 1818 was correct, and that the decision against the validity of the subsequent legislation could not be revised by that court. The whole result of the case is, that the only point decided by the supreme court of the United States upon the validity of either of the acts of the legislature of Connecticut was, that an act discontinuing a ferry which had been granted during the pleasure of the legislature was valid ; and the decision of the majority of the state court against the validity of the acts which undertook to revive the ferry was based upon the peculiar language of the charter of the bridge company.

The chief justice of Connecticut, in delivering the first opinion in that case, assumed that if the legislature had manifested an intention to reserve an unlimited control over the charter, by using the language ordinarily employed in reserving such a power—"This act may at any time be altered, amended or repealed by the general assembly"—the conclusion of the court must have been different. 16 Conn. 176. And in *English v. New Haven & Northampton Co.*, 32 Conn. 240, which is later than any of the cases in that State cited for the defendants, the court held that when the legislature had reserved a general power of altering, amending or repealing a charter, it might impose any additional condition or burden, connected with the grant, which it might deem necessary for the welfare of the public, and which it might originally and with justice have imposed.

Upon the whole case, taking into consideration the terms of the charter of the Hadley Falls Company, and the power of alteration, amendment and repeal previously reserved to the legislature by the public statutes of the Commonwealth, we are unanimously of opinion that the legislature has not surrendered or restricted its inherent power of regulating and protecting the fisheries on the Connecticut River, and, in so doing, of providing for the maintenance of a suitable fishway in the dam erected by that corporation ; and that the recent legislation compelling the making of such a fishway

does not impair the obligation of any contract of that corporation or its assigns with the Commonwealth or any other party. *Decree for the plaintiffs.*

C. Allen, Attorney-General, & *M. Williams, Jr.*, for the plaintiffs.

W. Gaston, & *F. Chamberlin* (of Connecticut), for the defendants.

APPENDIX.



A COLLECTION
OF THE
LAWS OF MASSACHUSETTS RELATING TO INLAND FISHERIES,
From the year 1623 through the year 1871.

PLYMOUTH COLONY FISH LAWS.

1623.

(Page 30.) ARTICLE 8. That fowling, fishing and hunting be free to all the inhabitants of this government: *provided*, that all orders from time to time made by this General Court for the due regulating of fishing and fowling be observed in place or places wherein special interest and propriety is justly claimed by the court or any particular person.

1633.

(Page 34.) *It is enacted by the Court*, That fishing, fowling and hunting bee free: provided, if any damage comes to any particulare by the prosecution of such exercise, restitutions bee made or the case actionable. But if any man desire to improve a place and stocke it with fish of any kind for his private use, it shalbee lawfull for the court to make any such graunt and for bid all others to make useof it.

[Re-enacted in 1636 and 1653.]

1637.—October.

(Page 57.) OF FISH.—*It is enacted by the Court*, That six score and twelve fishes shall be accounted to the hundred of all sorts of fishes.

[Re-enacted in 1658.]

1670.

(Page 161.) Whereas the providence of God hath made Cape Cod commodious for us for fishing with saines; and some careles psons have anoyed the same by casting their ballast neare the shore where such conveniency is; or by leaveing the garbidge of fish or dead fish to lye there roting, wherby such anoyace is:

This Court doth therefore order, That whosoever shall treaspas in any of the said kinds of annoyance shall pay the sune of forty shillings to the Colonie's use for every such default unto the pson that the county doth appoint to looke after the same; alsoe, this court doth further order, that whosoever of our inhabitants that draw mackerell on shore there, shall pay to the Collonie's use sixpence p. barrell for every barrell soc taken or the quantity that may amount to a barrell; and for every barrell or the quantitie

thereof soe taken by any forraigners in the aforesaid place shalbe payed one shilling and sixpence to the Collonie's use by the pson or psons that soe fish there; and at the begining of any voyage attempted there, the pson or persons soe doing shall att the entrance an the voyage put in sufficient securitie unto the pson appointed by the court under this trust for the payment of the aforesaid sume or sumes. (Continued on page 162.)

(Page 162.) Whereas wee have formerly seen great inconvenience of taking mackerell att unseasonable times, whereby there encrease is greatly deminished, and that it hath bine proposed to the court of the Massachusetts that some course might be taken for preventing the same, and that they have lately drawne up an order that henceforth noe mackerell shalbee caught, except for spending while fresh, before the first of July annually, on penaltie of the losse of the same, the one halfe to the informer and the other halfe to the use of the Collonie; and this order to take place from the 20th of this instant June.

1682.

(Page 197.) The law prohibited the catching of fish before they have spaumed is to be revived by the Comissioners att their next session.

(Page 283.) For the better improving of fishing for mackrel at the Cape with saynes or nets; that the fish be not wholly destroyed or driven off the shoar, with constant beating and shooting at them with their nets and saynes:

It is ordered by this Court, &c., That none shall set, shoot or hall sayne on shore with mackrel at the Cape before the fifteenth day of October yearly, nor after the twentieth day of November, on penalty of forfeiting for any mackrel so taken, without the compass of this time, eight shillings a barrel to the Colonie's use.

And that so good a commodity be not spoiled nor impaired by gripple persons that only minde their present benefit; but that it may be kept sweet and well preserved for a market, and so kept a commodity:

It is further ordered, That all such mackrel taken by saynes or nets at the Cape shall be there salted up in good sufficient cask, and not in lumber, neither on shoar nor on board of any boat, barque or other vessel, on penalty of forfeiting to the Colonie's use the one-half of what is so salted in lumber and not in tight casks.

And forasmuch as the lands where such benefit is made by fishing with saynes or nets hath been purchased by the Colony and are truely theirs:

It is also ordered, That no stranger, or such as are no inhabitants of this government, shall make use of our lands or shoar for sayning or halling of fish, but such as this Court give license to, on penalty of forfeiting all the fish of any kinde so taken by any without leave.

And all strangers that shall be allowed there to fish as abovesaid, whether taken in as partners with any of ours or otherwise, shall pay unto our water baily, or such as the court shall appoint to receive it, for the use of this Colony, two shillings for every barrel or quantity of a barrel of mackrel there caught in such away; and such of our own inhabitants as do so fish there, shall pay one shilling a barrel; and all such payments, whether by our own or strangers, shall be made in money to the said baily, or who is appointed.

And that peace and good order may be kept by all that fish there, and that the Colony may not be defrauded of their due by any :

It is further ordered, That the master of any vessel that shall come there to fish, or some known person of their company, shall presently upon their arrival there, before they take any fish, give under his hand to the baily, or his deputy, for their peaceable carriage there, and their due observance of the orders of the court concerning their fishing, who shall thereupon give them a ticket under his hand for their improving the season as abovesaid.

And if any man do refuse so to do, he or they shall be discharged from making use of our land on shoar there, at their peril; and if any prove troublesome, or disturb their peace, sell liquor to the Indians, prophane the Sabbath, or be otherwise disorderly, the baily or his deputy is hereby impowered to carry such before the next magistrate, who may issue the case, send the offenders to prison, or take bond for their appearance at court, as he shall see cause, and the whole charge thereof be born by him or them that do so offend.

And that the water baily be under oath, as other publick officers, as for the faithful discharge of his trust, so for his due and seasonable ordering, and giving an account to the treasurer, for what is the Colonie's upon fishing account, within one month after the said voyage is ended, or sooner if it may be.

And for every barrel of herring at any time caught by nets on the said Cape Cod shoar, six pence per barrel be paid by any inhabitant that shall so take them, and twelve pence per barrel by strangers.

And whosoever shall take any basse on the aforesaid shoar with nets, shall pay to the Colonie's use six pence per quintal, according to a former order, and to be paid also in money.

SECT. 5. *And it is ordered, &c.,* That if any swine, belonging either to English or Indians, do there annoy or trespass such as there fish as above-said in the mackrel seasons, it shall be lawful for any to make seizure of such swine, paying one-half of the value of such swine to the said baily or his deputy for the Colonie's use. * * * * *

ANCIENT CHARTERS.

(Page 113, ch. 46.) SECT. 5. This court being informed that the taking of mackrel at unseasonable times do greatly diminish their increase, and will in the issue tend to the spoil of the trade thereof:

Do order and enact, That henceforth no mackrel shall be caught, except for spending whilst fresh, before the first of July annually, on penalty of the loss of the same, the one half to the informer, and the other half to the use of the country. And any magistrate or county court is empowered to act herein, to all intents and purposes, for the execution of this law.

[Repealed March 5, 1693. Page 254, sect. 7, A. Charters. Revived Massachusetts Perpetual Laws, page 143, ch. v., 1702.]

(Page 148, ch. 63.) SECT. 2. Every inhabitant who is an householder shall have free fishing and fowling in any great ponds, bays, coves and rivers, so far as the sea ebbs and flows within the precincts of the town where they dwell, unless the freemen of the same town or the General Court have otherwise appropriated them.

Provided, That no town shall appropriate to any particular person or persons, any great pond containing more than ten acres of land, and that no man shall come upon another's propriety without their leave, otherwise than as hereafter expressed.

The which clearly to determine :

SECT. 3. It is declared that in all creeks, coves, and other places about and upon salt water, where the sea ebbs and flows, the proprietor, or the land adjoining, shall have propriety to the low water mark, where the sea doeth not ebb above a hundred rods, and not more wheresoever it ebbs further.

Provided, That such proprietor shall not by this liberty have power to stop or hinder the passage of boats or other vessels, in or through any sea, creeks or coves, to other men's houses or lands.

SECT. 4. And for great ponds lying in common, though within the bounds of some town, it shall be free for any man to fish and fowl there, and may pass and repass on foot through any man's propriety for that end, so they trespass not upon any man's corn or meadow.

COLONY OF PLYMOUTH.

1684.

(Page 205.) *This Court doth therefore enact, and be it heerby enacted by the authoritie thereof*, That no p'rson or p'rsons whatsoever, after the publication heerof, shall catch or draw on shore any mackerell, with nett or netts, sayne or saines, in any p'rte of this Collonie, and if any p'rson or p'rsons shall heerafter presume to catch any mackerell by setting or shoolding any nett or saye, every such p'rson or p'rsons soe offending as aforsaid, shall forfeitt for his or their said offence all such netts or saines as shalbe soe improved, and all such mackerell as shalbe soe caught by him or them; and shall alsoe forfeite every such vessell and all such vessells or boates as shalbe employed therin, whether catch sloop or boate as shalbe employed in taking or carrying away any such fish, if att any time the p'rson or p'rsons soe offending be taken within the govrment, or the vallue thereof, the one moiety to the Collonie and the other moyety to the informer that shall prosecute the same.

And for the better execution of the said law, power shall be given by some one or more of the magistrates by warrant to some fitt man to act as a water bayliff to make seasure of any such forfeitures as aforsaid.

PERPETUAL LAWS.

1702.

(Page 143, ch. 5.) *Be it enacted*, That the clause above recited, shall be, and is hereby revived and re-enacted: and that henceforth no person or persons whatsoever shall presume to catch or cause to be caught any mackerel (except for spending whilst fresh) before the first of July annually; on penalty of forfeiting all the mackrel so caught contrary to the true intent and meaning of this act, and twenty shillings per barell over and above for each barrel of the same: the one half of the said forfeiture to be to her majesty, for, and towards the support of this her government; and the other half to him or them that shall inform and sue for the same in any of her majesty's courts of record within this province.

1709.

AN ACT to prevent Nuisances by Hedges, Wears, and other incumbrances obstructing the passage of Fish in Rivers.

(Page 162, ch. 3.) *Be it enacted*, That no wears, hedges, fish-garths, stakes, kiddles, or other disturbance or incumbrance shall be set, erected or made, on or across any river, to the stopping, obstructing, or straitning of the natural or usual course and passage of fish in their seasons, or spring of the year, without the approbation and allowance first had and obtained from the general sessions of the peace in the same county; who are hereby authorized and impowered, on application made to them at their sessions, to grant liberty for the same, or to deny it, as they shall see it to be either a public good or damage; and so yearly from time to time, to be allowed or disallowed, as they shall direct.

And that all wears, hedges, fish-garths, stakes, kiddles, or other incumbrance whatsoever, set up and made, or hereafter to be levied, set up or made in, on or across any river, to the straitning, obstructing and stopping the natural, common or usual passage of fish in the spring or proper seasons of the year, without approbation or allowance first had and obtained for the same, in manner as in and by this act is directed, are declared to be a common nuisance, and shall be demolished and pulled down, not to be again repaired or amended. And that on complaint made to the general sessions of the peace, or to any two justices of the peace, *quorum unus*, in their respective counties; a writ shall be granted to the sheriff or constable of the town where the nuisance is done, to cause the party or parties complained of to be examined; and upon conviction to remove the same; and to command suitable assistance therefor, at the cost and charge of the person or persons so offending.

Provided, That nothing herein contained, shall be construed to extend to the pulling down or demolishing of any mill-dam already made, or that shall hereafter be lawfully and orderly made.

1727.

AN ACT for rendering more effectual the Act intituled An Act to prevent Nuisances by Hedges, Weares, and other incumbrances obstructing the passage of Fish in Rivers.

(Page 239, ch. 9.) Whereas, in and by an act made and pass'd in the eighth year of the reign of Queen Anne, intituled An Act to prevent nuisances by hedges, weares, and other incumbrances obstructing the passage of fish in rivers, all such incumbrances in the rivers are disallowed and forbidden without the approbation of the courts of general sessions of the peace in the respective counties, and ordered to be demolished and pulled down, but no penalty is provided in the said act:

Wherefore, for the more effectual preventing such nuisances:

Be it enacted, That whosoever after the publication of this act, shall set up, erect or make any weares, hedges, fish-garths, stakes, kiddles, or other incumbrances whatsoever, on or across any river for straitning, obstructing or stopping the natural, usual or common passage of the fish in the spring or other proper seasons of the year, without the approbation of the court of general sessions of the peace, shall for every such offence forfeit and pay the sum of ten pounds, to be sued for and recovered by plaint, bill, or information, in any of his majesty's courts of record within the county

where the offence is committed; one half thereof to be to him that shall inform and sue for the same, and the other half to the poor of the town or towns where such incumbrances have been made or set up.

1741.

AN ACT in addition to an Act made to prevent the Destruction of the Fish called Alewives, and other Fish.

(Page 297, ch. 6.)* Whereas, notwithstanding the several acts made for the preservation of the fish, and to give them free passage up and down the rivers in their seasons, yet by reason of the many dams erected, and often erecting across such rivers and streams where the several sorts of fish pass up into the natural ponds to cast their spawn, said fish are diverted in their passage, to the great decay and ruin of such fishery :

Be it therefore enacted, That whosoever shall hereafter erect or build any dam across any such river or stream where the salmon, shad, alewives, or other fish usually pass up into the natural ponds to cast their spawn, shall make a sufficient passage-way for the fish to pass up such river or stream, through or round such dam, and shall keep it open for the free passage of the fish from the first day of April to the last day of May annually, and all the owners or occupants of any mill-dam or other dams heretofore erected and made across any such river or stream where the fish can't conveniently pass over, shall make a sufficient way either round or through such dam for the passage of such fish, at or before the first day of September next, and after that to keep such passage way open from the first day of April to the last day of May annually, on pain that every person offending in any of the particulars aforesaid, shall forfeit and pay the sum of fifty pounds for each offence.

Provided, nevertheless, Whereas, in some of the rivers or streams, the said fish do not pass up to spawn in the times by this act provided for, that it shall be in the power of the several towns wherein such streams are, or are adjoining, or the selectmen of such towns, or the major part of them, to appoint or order the times of keeping open such sluice-ways as in their judgment may be agreeable, to the natural time of said fish passing up to spawn, so as it does not exceed sixty days annually.

And be it further enacted, That the owners or occupants of such dam or dams, shall allow sufficient water passage round, through or over such dams, for the passage of such fish or their young spawn, in the season of their going down such rivers or streams, on penalty of forfeiting the sum of fifty pounds for every offence.

Provided, nevertheless, That whosoever is an owner or occupant of such dam or dams erected before the year one thousand seven hundred and nine, and by this act is obliged to make such passage-way for the fish as aforesaid, shall, after he has effected the same, present his account of the reasonable charge thereof, to the court of general sessions of the peace of the same county for their allowance, who are hereby impowered to proportion the several towns' parts thereof who are advantaged thereby, and order each of said towns to assess and pay the same to such owner or occupant ac-

cordingly, and the owners or occupants of such dam, shall afterwards maintain such passage-way at his or their own cost and charge.

And be it further enacted, That it shall be in the power of any town at their annual meeting in March, to chuse one or more persons, whose business it shall be to see that the said passage-ways are open pursuant to this act, and that said fish may not be obstructed in their usual passing up and down stream, and to appoint the proper place or places for the taking such fish with scoop nets, and to limit the particular times and days for the taking the same.

Provided, also, That this act shall not be construed so as to affect the order of this Court, pass'd in January, one thousand seven hundred and thirty-eight, relating to Watertown mill-dam.

And that the several fines and penalties arising by virtue of this act, shall be sued for and recovered in any court of record proper to try the same, by any person that shall prosecute and sue for the same, one half of such sum to be to and for the use of the prosecutor, and the other half to be to and for the use of the poor of the town where the offence shall be committed.

AN ACT in Supplement of an Act intituled "An Act in addition to an Act made to prevent the Destruction of the Fish called Alewives and other Fish." (1741, ch. 6.)

(Page 298, ch. 7.) Whereas, * * * * * no penalty is therein ordered to be imposed on such as shall take alewives or other fish at other times or places, than such as shall be appointed in pursuance of said act:

Be it therefore enacted, That whosoever shall presume to take any of the kinds of fish in said act enumerated (whether with scoop-nets or otherwise) in any river or stream within or adjoining to any town within this province, at any other place or time than such as has been or shall be limited and appointed by any town in pursuance of said act, such offender or offenders shall forfeit and pay the sum of ten shillings for each offence; one moiety thereof shall be for the use of the poor of the town where the offence shall be committed, the other moiety to be to him or them who shall inform and sue for the same before one or more of his majesty's justices of the peace in the same county.

Provided, That this act be not construed to affect any person taking fish in any town where such town shall not in manner as aforesaid, appoint the time and place for taking the fish aforesaid.

1743.

AN ACT in addition to an Act made in the fifteenth year of his present Majesty's reign, intituled "An Act in addition to an Act made to prevent the Destruction of the Fish called Alewives and other Fish."

(Page 313, ch. 5.) Whereas, * * * * * by reason that no direction is therein given with respect to the sufficiency of the sluice or passage so to be made or left open, there arises great difficulty to the owner or occupant of such dams in complying therewith: And whereas, by reason that in some streams and rivers the said fish pass sooner, and in others later in the year than the time is prescribed in said additional act, as well as that the time of their passing up and down is in some streams and

rivers longer, and in some shorter, so that it is found by experience that the general rule in the aforesaid cases by law provided, does not only fail of the good ends proposed thereby, but also exposes the owners and occupants of such dams to trouble and damage not necessary to answer the good purposes of said additional act: Wherefore,

Be it enacted, That it shall and may be lawful for any owner or occupant of any such dam or dams already built, or that may hereafter be built, and who are or may be obliged by said additional act to open or leave open such passage as aforesaid, to apply to the next court of general sessions of the peace, to be holden in and for the county where such mill-dam is, and the justices of the court respectively, on such application, are impowered, and directed to appoint a committee of three sufficient and as much as may be disinterested persons, under oath, to repair to the dam where the passage is proposed to be opened, and carefully view the same, and in the best manner they are able, to inform themselves of the most proper place for the passage of such fish up and down stream, of what dimensions the same shall be made or appointed to be, and what part of each year, and how long the same shall be kept open; and return the same under their hands, or the hands of the major part of them, to the said court for their acceptance; which return so made and accepted, shall be deemed and adjudged the lawful rule of proceeding in making and keeping open the passage and passages for the fish in passing up and down the rivers and streams for the future: anything contained to the contrary in said additional act notwithstanding.

Provided, nevertheless, That if at any time after such determination, either party shall think themselves aggrieved by such determination, it shall and may be lawful for the owner or owners, occupant or occupants of such mill-dam or dams, or any other five persons of the other party, who may expect benefit by said fish passing up such rivers or streams, once more to apply to the said court for a new view, and report on the premises in manner aforesaid, which being by said court accepted, shall be final; the charge of such application to be born by the persons applying, in case no material alteration on the first return is made, but otherways be born by the owners of the dam, in proportion to their interest, to be first stated and allowed by the said court of general sessions, and may be recovered by action or actions of debt in any court proper to try the same.

1745.

AN ACT in addition to and for rendring more effectual the Laws already in being for preventing the Destruction of the Fish called Alewives, and other Fish. (Page 320, ch. 2)

(Preamble. The two preceding acts are here quoted.)

And whereas, it may happen that in some rivers or streams, across which dams are built, it may be doubtful whether the fish may be said to usually pass or cast their spawn, and so as to render it necessary that a way should be left open in such dams for their free passage, and many inconveniencies may arise from such doubt or uncertainty:

Be it therefore enacted, That when and so often as application shall be made to the court of sessions by the owner or occupant of any mill-dam or dams, either of such dams as have no passage-way, or of such dams through which a passage-way has been already made, and a committee shall thereupon be appointed by such court pursuant to the last recited act,

and such committee shall repair to any dam or dams, and it shall appear to them upon inquiry, that the fish do not, or in case of a passage being made or kept open, would not usually pass up the river or stream across which such dam is or shall be built in such numbers as that it is necessary a passage-way through such dam should be made or kept open, or that the passing of the fish up such river will not be of greater general benefit than the leaving open of passage-ways in such dams will be of damage to the owners of the mills and other persons, then, and in either of such cases, said committee shall be empowered to make a report that such passage-way is not necessary, and such report being accepted by the court of sessions, the owner or occupant of such dam, shall thereupon be freed from all obligation to make or keep open any passage; any thing in the aforementioned acts to the contrary notwithstanding. And the charge of the application that shall be made by the owner or occupant of any mill-dam or dams, and all proceedings of the court thereupon, pursuant to this act, or to the said last recited act, shall be born and paid by such owner or occupant.

Provided, always, That if at any time after such determination, any person apprehending it necessary that a passage-way should be opened in such dam, shall thereupon make application to the court of sessions, said court shall be empowered to appoint a new committee, who shall have the same power the first committee by law had, or might have had, and upon such committee's reporting that a passage-way is necessary in such dam or dams, and the demensions thereof, and the time it shall be kept open, and upon such report being accepted by the court of sessions, the owner or occupant of such mill or dam shall be as fully obliged to keep open such passage as if the former report had never been made and accepted; any thing in this act to the contrary notwithstanding; the charge of such application and all proceedings thereupon, to be paid by the person or persons making the same, or by the owner or occupant of such dam, as the court of sessions shall order.

And whereas, in some counties within this province, the justices of the court of sessions have refused to admit any application from the owner or occupant of any mill or mill-dam, by reason that such application has not been made at the court next immediately following the publication of the last recited act:

Be it further enacted, That the several courts of sessions within this province be, and hereby are empowered and directed to admit, proceed and determine upon any such application at any court at any time held for the county, and all such proceedings shall be deemed as valid to all intents and purposes as if they had been acted upon at the court next immediately following the publication of said act.

And whereas, in many rivers and streams within this province, neither shad, salmon nor alewives usually swim, or would pass up such river or stream, altho' a passage-way was made and kept open through the several dams built across such rivers or streams, and the advantage of other fish that pass up such rivers or streams, is not equal to the damage that may arise by keeping open a passage-way through such dams:

Be it enacted, That no owner or occupant of any mill-dam or dams built or to be built within this province, shall be liable to any penalty for not making or keeping open a passage-way through such dam or dams, except those dams only which are built across such rivers or streams where either

of the aforementioned fish, viz., salmon, shad or alewives usually swim or pass; any former law, usage or custom, to the contrary notwithstanding.

Provided, always, That it shall be in the power of any person at any time, to make application to the court of sessions, setting forth that the passage of other fish up such rivers or streams, is of such advantage as to render a passage-way through any dam or dams necessary, and the justices of the court of sessions are impowered on such application to appoint a committee to repair to such dam or dams, and upon such committee's reporting that a passage-way or ways for the fish is necessary, the dimensions thereof, and the time for keeping it open, and upon such report's being accepted, the owner or occupant of such dam or dams, shall be as fully obliged to make and keep open such passage-way or ways as if shad, salmon or alewives usually passed up such river or stream.

And whereas, the mill-dam in the town of Watertown, referred to in the aforesaid act of the fifteenth of his present majesty, has not been subjected in like manner with the other mill-dams within this province :

Be it therefore enacted, That if any person or persons whatsoever, shall cause the dam of said mill to be raised, so as to prevent the passage of the fish over the same, at any time between the breaking up of the ice in the winter or spring, and the first day of May annually, and in any year hereafter, without the express leave or consent of the selectmen of the towns of Watertown and Newtown, every person so offending, shall forfeit and pay the sum of five pounds for each offence, to be recovered in any court of record proper to try the same, and for the use of him or them that shall inform and sue therefor.

SPECIAL LAWS.

1781.

AN ACT more effectually to prevent the Destruction of Alewives in their passage up the Rivers and Streams in the Towns of Salem and Danvers.

Whereas it is necessary for the preservation of the fish called alewives, in their passage up the rivers and streams in the towns of Salem and Danvers, into the ponds at the head of those streams, that the committees hereafter to be appointed in those towns, to see that the passage-ways for said fish be not obstructed, should have their respective jurisdiction enlarged, and further authority given them for the purposes aforesaid.

(Vol. 1, page 5.) SECT. 1. That towns of Salem and Danvers shall be, and they are hereby respectively empowered and directed at their meetings in March annually, each town to choose three or more persons to see that the laws respecting the passage-ways for said fish be observed. And each person so chosen shall take an oath faithfully to discharge the duties required of him by law. And the committees of said towns shall meet together annually, on or before the tenth day of April, at such time and place as the person first chosen by the town of Salem shall appoint, to be by him duly notified. And the major part of the committees present at such meeting are hereby authorized and empowered to order the times, places and manner in which said fish may be taken within the limits of either of said towns, and also the number any one person may be allowed to take on any one day. And the members of the committees aforesaid shall have joint and concurrent

jurisdiction in either of said towns; and the doings of said committees, or either of them, or the members of either of them, shall have full power to act as such, in either of said towns. And in case either of said towns shall neglect to choose such committee, the committee chosen by the other town shall be as fully empowered as though such town had not neglected. And the said committees, or either of them (on neglect as aforesaid) shall have power to cause the whole natural course of the streams through which said fish pass to, in both the said towns, to be kept open and without obstructions, to remove any such as may be found therein, to make the passage-ways of such streams wider or deeper, if they find it necessary. And the said committees, or either of them, or any member thereof, shall have authority to go on the land of any person through which any such river or stream runs, or on which such land may be bounded, for those purposes, without being considered as trespassers. And any person who shall molest or hinder said committees, or either of them, or any member thereof, in the execution of the business of his or their office or offices, or shall obstruct any passage-way in such river or stream, otherwise than may be allowed by such committees or committee, he or she shall forfeit and pay a sum not exceeding fifty pounds, nor less than ten pounds.

SECT. 2. *Be it further enacted*, That the said committees, or the major part of them present at any meeting duly notified, being not less than three in number, shall be, and they are hereby authorized and empowered to open any dam or sluice-head of any mill erected or that may be erected on or over any such river or stream, at the expense of the owner or owners of such dam or sluice, provided such owner or owners shall neglect to open the same, when thereto required by said committees or such major part of them as aforesaid; and the dam or sluice so opened shall continue open to such depth and width as the committees or said major part may judge necessary, from the tenth day of April to the tenth day of June in every year. And in case any person or persons shall obstruct the passage-way allowed or ordered by said committees, or such major part of them, in any dam or sluice, each person so offending shall forfeit and pay a sum not exceeding fifty pounds, nor less than ten pounds.

SECT. 3. *Be it further enacted*, That the owner or owners of any tide-mill erected, or that may hereafter be erected on any such river, shall keep a sluice-gate hoisted, or passage-way open, of three feet in width and two feet high, three hours at least before high water in each tide, from the said tenth day of April to the tenth day of June annually, on penalty of forfeiting for each tide that it shall not be hoisted or the passage-way opened, a sum not exceeding three pounds, nor less than five shillings. And the bottom of the passage-way so opened shall be as low as the said committees, or the major part as aforesaid, shall judge necessary.

SECT. 4. *Be it further enacted*, That if any person or persons shall take any of said fish, on any day, or in any place, or in any manner, or in greater numbers than shall be allowed by said committees as aforesaid, each person so offending shall forfeit and pay a sum not exceeding forty shillings, nor less than five shillings; and no seines shall at any time be made use of to take said fish, nor shall they be taken in any manner more than three days in any one week.

SECT. 5. *Be it further enacted*, That if the committees aforesaid, or either of them, or any member thereof, shall detect any person or persons

attempting to take any of said fish on any day, at any place, in any manner, or in a greater quantity, otherwise than is allowed by said committees, and shall find fish with such person or persons, such person or persons shall be doomed to have taken said fish, and be subject to the penalties of this act accordingly.

SECT. 6. *Be it further enacted*, That all the penalties incurred by the breach of this act, may be sued for and recovered in any court of record in the county of Essex proper to try the same. And all sums as recovered as forfeited by this act, shall be appropriated, one moiety thereof to the prosecutors and the other moiety equally divided between the said towns of Salem and Danvers. And no person, by reason of his being one of either of the committees aforesaid, shall be thereby disqualified from being a witness in any prosecution for breach of this act.—[February 19, 1781.

AN ACT to provide more effectually for the Preservation of the Fish called Alewives, in the Streams running into Merrimack River, within the Town of Andover.

[Made perpetual March 7, 1797. Another Act but not repealing this one, March 9, 1792. This limited to four years, but extended afterwards.] (See 1765.)

Whereas it is found that the laws already made are not sufficient to prevent the destruction of the fish called alewives, in the streams within the town of Andover, which run into Merrimack River :

(Page 10.) SECT. 1. That an act made in the year of our Lord one thousand seven hundred and fifty-five, entitled “An Act for preventing the unnecessary destruction of Alewives and other fish within this Province,” be, and it is hereby extended to the streams herein before mentioned. And the selectmen of the town of Andover are hereby empowered to determine what number of barrels of said fish may be caught for market, and to let out the same in manner as is in said act prescribed, at any time in the months of April and May annually, as well as in the month of March therein specified.

SECT. 2. *Be it further enacted*, That if any person shall catch, or shall attempt to catch, any of the before mentioned fish, in any part of the streams herein before recited, at any time between the hours in the evening and five in the morning, every person so offending shall forfeit the sum of not less than twenty shillings, nor more than three pounds, for every offence. And the oath of any officer chosen at the annual meeting in March to see that the passage-ways for fish are kept open, testifying any fact that may be considered as a violation of this or any former act of the General Court made for the preservation of fish, shall be received as sufficient evidence of the same.

SECT. 3. *Be it further enacted*, That each and every of the officers aforesaid be, and he is hereby empowered to make search for, and to seize any parcel of said fish which he has reason to suspect were taken at any time or place, or in any way by law prohibited. And if any such officer shall have reason to suspect that any of said fish so taken are secreted under lock, or in any other way, he is hereby empowered in obedience to a warrant (which any justice of the peace in the same county is empowered to grant), on application therefor from such officer, to break open such lock or other obstruction, in the day-time, and having seized such fish, to take them into his custody; and the same officer shall give public notice of such seizure, by

posting an advertisement of the same at the public house nearest to the place where such seizure was made; and if no person shall appear to said officer to claim said fish within twenty-four hours after posting said advertisement, such fish, and any cask in which they may be packed, shall be forfeited. And if any person shall appear as aforesaid, to claim said fish, then the said officer shall require the claimer to appear before some justice of the peace of the same county, who shall hear and determine the cause, except the value of the fish seized exceed forty shillings, in which case he shall require the said claimer or claimers to recognize, to appear before the next court of general sessions of the peace for the same county; and if sufficient evidence be not offered to satisfy the justice or the court, that the fish so seized were taken at some other time and place, and for some other purpose than by law is prohibited, then the said fish, and any cask in which they may be packed, shall be forfeited; and all fish that may be forfeited in consequence of this act, shall be sold by the officer who seized them; and all forfeitures in consequence of this act, after paying charges, shall enure one-half to the said officer, and the other half to the poor of the town of Andover.

SECT. 4. *Be it further enacted*, That the officers before mentioned be, and they hereby are empowered to require suitable aid to enable them to execute their office; and any person who shall refuse or neglect to give aid when thereto required, as herein provided, he shall, on conviction thereof before any justice of the peace of the same county, forfeit the sum of three pounds.

This act to continue and be in force for the space of four years from the first day of next November, and no longer.

This act passed May 8, 1781.

1786.

AN ACT to prevent the Destruction of Salmon, Shad and Alewives, and other Fish in the Agawam or Westfield River.*

SECT. 1. (Page 126.) That from and after the first day of March next, no person or persons be allowed to catch any salmon, shad, or alewives with seines, nets, pots, or in any other way, in any part of said river, within two† miles of the entrance thereof into Connecticut River, nor in Connecticut River within half a mile south, or forty rods north of the mouth, or entrance of said Agawam into Connecticut River; and no person or persons shall catch any salmon, shad or alewives, in any other part of said Agawam River, at any other time, than between sunset on Monday evening, and sunset on Thursday evening in each week; and if any person or persons shall presume to catch any fish in the said rivers, contrary to the true intent of this act, he or they so offending, shall for each offence, forfeit and pay a fine of four pounds; and the seine, net or machine, used in catching said fish, shall be forfeited.

SECT. 2. *Be it further enacted*, That all weirs, fences, and other incumbrances now erected, or that shall hereafter be erected, in any part of the said Agawam River, so as to stop the free course or passage of the said fish up the said river, shall be deemed common nuisance, and as such shall be pulled down and demolished; and any person or persons that shall hereaf-

* Altered as to Connecticut River, March 26, 1788.

† Reduced to one mile by Act March 8, 1796.

ter erect any such wears, fences or other incumbrance, or shall continue such already erected, on conviction thereof, shall forfeit and pay the sum of three pounds.

SECT. 3. *Be it further enacted*, That all fines and forfeitures incurred by any breach of this act, shall and may be recovered by action or information before any justice of the peace within the county where such offence shall be committed; one half of such fines shall enure to him or them who shall sue or prosecute for the same, and the other half to the poor of the town where the offence shall be committed.

This act passed June 27, 1786.

1787.

AN ACT to prevent the Destruction, and to regulate the Catching of the Fish called Alewives, in their passage up the Rivers and Streams in the Town of Harwich, in the County of Barnstable.

[Additional Acts, 1813, ch. 57, 115; 1824, ch. 107; 1844, ch. 67.]

(Page 166.) SECT. 1. That the town of Harwich shall be and hereby are empowered and directed, at their meeting for the choice of town officers in March or April annually, to choose three or more persons, being freeholders in the said town, to see that this act be duly observed; and each person so chosen shall be sworn faithfully to discharge the duties required of him by this act; and the said committee shall meet together annually, on or before the twentieth day of April, at such time and place as they, or a majority of them, shall appoint, and the major part of the committee present at such meeting, are hereby authorized and empowered to order the times places and manner in which the said fish may be taken; and the said committee, or a majority of them, are hereby fully authorized and empowered to cause the natural course of the streams through which the said fish pass, to be kept open and without obstruction, to remove any such as may be found therein, and to make the said passage-ways wider or deeper if they shall judge it necessary; and the said committee or either of them, paying a reasonable consideration therefor if demanded, shall have authority for those purposes to go on the land or meadow of any person through which said streams run, without being considered as trespassers; and any person who shall molest or hinder the said committee or either of them in the execution of the business of his or their office, or shall obstruct any passage-way in the said rivers or streams, otherwise than may be allowed by the said committee, he or they shall forfeit and pay a fine for every such offence, not exceeding forty shillings, nor less than twenty shillings.

SECT. 2. *Be it further enacted*, That the said committee, or the major part of them present at any meeting duly notified, being not less than three in number, shall be and hereby are authorized and empowered, to open or cause to be opened any dam or sluice of any other dam now erected, or that may be hereafter erected on, or over any of the said rivers or streams (between where such rivers or streams empty themselves into the sea at low water, and the ponds in which the said fish usually cast their spawn) at the expense of the owner or owners of such dam or sluice: *provided* such owner or owners shall neglect to open the same when thereto required by the said committee or the major part of them, immediately after being

thus required so to do; and the dam or sluice so opened shall continue open in every year, to such depth and width, and for such term of time between the fifteenth day of April and the tenth day of June, as the major part of the said committee shall judge necessary; and if any person or persons shall obstruct the said passage-ways allowed or ordered by the said committee, or the major part of them, in any dam or sluice, such person so offending shall on conviction before any justice of the peace in the county of Barnstable, pay a fine for every such offence not exceeding forty shillings, nor less than twenty shillings, and the said committee shall cause every such obstruction to be forthwith removed.

SECT. 3. *Be it further enacted*, That if any person or persons shall take any of the said fish in the rivers, streams or ponds aforesaid, before they shall have cast their spawn, at any time, in any place, or in any manner other than shall be allowed by the said committee as aforesaid, each person so offending, for each and every such offence shall, on conviction, as aforesaid pay a fine not exceeding twenty shillings, nor less than five shillings, if the quantity of fish so taken is less than one barrel; but if the quantity so taken shall be one barrel or more, such person or persons so offending shall forfeit and pay for each and every barrel of fish so taken, the sum of twenty shillings.

SECT. 4. *Be it further enacted*, That if the committee aforesaid, or either of them, shall detect any person or persons in attempting to take any of the said fish at any time, or in any place, or in any manner otherwise than is allowed by the said committee, or shall find such fish with such person or persons, such person or persons shall be deemed to have taken the said fish unlawfully, and shall be subject to the penalties of this act accordingly, unless such person or persons can make it appear on trial, that they came by the said fish in some other way.

SECT. 5. *Be it further enacted*, That the committee to be chosen as aforesaid, or the major part of them, shall determine what days in the week the said fish shall be taken, also on the certain parts of the said rivers and streams where the said fish may be taken, to be particularly bounded or described, so that the said places may be easily known; and shall notify the inhabitants thereof, by posting up notifications in several public places in the said town of Harwich, within ten days after their being chosen as aforesaid.

SECT. 6. *Be it further enacted*, That all penalties incurred by any breach of this act, shall be recovered by complaint before a justice of the peace, in the county of Barnstable, where the said penalty doth not exceed forty shillings, allowing an appeal to the court of general sessions of the peace in the county aforesaid; and where the penalty prosecuted for shall exceed the sum of forty shillings, it may be sued for and recovered in any court in the county of Barnstable proper to try the same, and all sums recovered as forfeited by this act, shall be for the support of the poor in the town of Harwich; and no person, by reason of his being one of the said committee, or an inhabitant of the said town, shall thereby be disqualified from being a witness in any prosecution for breach of this act.

SECT. 7. *Be it further enacted*, That it shall be the duty of the committee aforesaid, to take care that a sufficient passage-way be kept open annually for the young alewives to pass from the ponds to the sea.—[July 4, 1787.

1788.

AN ACT for the Preservation of the Fish called Alewives in Mattapoiset River, in Rochester, in the County of Plymouth, and for the regulating the taking the said Fish, in the said River.

[1789, p. 247; 1791, p. 290; 1803, p. 91; 1810, ch. 60; 1814, ch. 99; 1817, ch. 136.]

(Page 180.) Whereas the law which was heretofore made for the preservation of the fish called alewives, in Mattapoiset River, in the town of Rochester, and for regulating the taking the said fish, in the said river, has been found insufficient to answer the said purposes :

SECT. 1. That the owner or owners of each and every mill-dam on the said river, shall make, provide and continue a sluice-way of three feet wide, and eight inches deep, for the said fish to pass their respective dams, as low as the said selectmen of the said town of Rochester shall judge convenient for the said fish to pass in. And the selectmen of the said town of Rochester are hereby authorized, on the second Monday of April annually, to open the said sluice-ways which, when opened by them, shall remain open until the twentieth day of May annually; and the owner or owners of any dam on the said river who shall neglect or refuse to make, provide and continue a sluice-way as aforesaid, shall shut or obstruct the same during the term the said sluice-way is to be kept open as aforesaid, shall forfeit and pay the sum of forty pounds for each offence.

SECT. 2. *Be it further enacted*, That the said town of Rochester, at their annual meeting for the choice of town officers, in the months of March or April annually, are hereby authorized to choose a committee consisting of not more than twelve, nor less than two suitable discreet persons, for inspectors of the said river, whose duty it shall be, within four days after their appointment, to post up in four public places in the said town nearest the said river, a notification under their hands, or the major part of them, pointing out the times when, and the places where the said fish may be taken in the said river; and if any person shall pull down or deface such notification, he or she shall for each offence forfeit and pay ten shillings; and if such committee shall neglect or refuse to post up such notification within the said term of four days, such committee shall forfeit and pay ten shillings; and any person who shall presume to take any of the said fish in the said river, except at the times and places appointed by the said committee as aforesaid, shall forfeit and pay three pounds for each offence.

SECT. 3. *Be it further enacted*, That if any person or persons shall make any wears, or any other obstruction, to hinder the passage of the said fish up the said river, each person so offending shall forfeit and pay the sum of five pounds; and any person who shall take or catch any of the said fish in said river, with any other instrument than a dip-net, shall forfeit and pay four pounds for each offence.

SECT. 4. *Be it further enacted*, That if any person shall set or draw any seine, drag-net, or marsh-net in the said river, or within the following bounds of the harbor adjoining it, viz.: beginning at the south-westwardly end of the inland, owned by the Rev. Mr. La Barron, and from thence to the mouth of the creek which runs out of Barlow's Pond (so called), from and after the tenth day of April to the twentieth day of May annually, each person so offending shall forfeit and pay ten pounds.

SECT. 5. *Be it further enacted*, That all the forfeitures mentioned in this act shall accrue to the said town of Rochester, to be recovered by the treasurer of the said town in an action of debt in any court proper to try the same; and no person shall be considered as disqualified from giving evidence in any such action on account of his living in or being an inhabitant of the said town of Rochester.

SECT. 6. *Be it further enacted*, That the agreement made and entered into between the said town of Rochester and the owners of the lower dam, on the said river, with regard to the premises, shall be good and valid in law.—[March 1, 1788.

AN ACT to prevent the Destruction of Fish called Shad and Alewives, in Ten and Three-Miles Rivers, in the County of Bristol

[Repealed as regards Three-Miles River, Feb. 11, 1791.]

(Page 183.) Whereas it is necessary for the preservation of the fish called alewives, in their passage up the rivers, called and known by the name of Ten-Mile and Three-Mile River, in the county of Bristol, that some further provision should be made for the said purpose :

SECT. 1. *Be it enacted*, That the several towns through which the said Ten-Mile and Three-Mile River run, shall be, and they are hereby empowered and directed, in the month of March or April annually, to choose three or more persons in each town respectively, being freeholders within the same, as a committee, who shall take an oath to the faithful discharge of his or their duty; and the said committee, or the major part of them, shall have power to cause the natural course of the said streams through which the said fish pass, to be kept open, and without obstruction, and to remove all such obstructions as may be found therein, and to make the passage-ways wider or deeper if they shall find it necessary; and the committee, or a major part of them, shall have authority for such purposes, to go on the land of any person through which the said Ten and Three-Mile Rivers run, without being considered as a trespasser or trespassers; and any person who shall hinder the said committee, or either of them, in the execution of the business of his or their office, or who shall obstruct any passage-way in the said rivers, otherwise than may be allowed by the said committee, he or they shall forfeit and pay a fine not exceeding the sum of fifteen pounds, nor less than five pounds.

SECT. 2. *Be it further enacted*, That the said committee, or a major part of them, at any meeting by them duly notified, shall be and hereby are authorized and empowered to open any dam or sluice-way of any mill erected, or that may be erected on, over or across the said rivers, at the expense of the owner or owners of such dam, provided such owner or owners shall neglect to open the same when they are required by said committee; and the said dam or dams, or sluice-way or ways, so opened, shall continue open to such width and depth, and for such length of time betwixt the first day of April and the last day of May annually, as the major part of the said committee shall judge necessary; and in case any person or persons shall be found to obstruct the passage-ways allowed or ordered by the said committee in any dam or sluice, such person or persons so offending shall forfeit and pay a fine not exceeding the sum of ten pounds, nor less than five pounds.

SECT. 3. *Be it further enacted*, That all penalties incurred by a breach of this act may be sued for and recovered in any court in the county of Bristol proper to try the same; and all sums so recovered or forfeited by a breach of this act, shall be appropriated, one moiety thereof to the prosecutor or prosecutors, and the other moiety thereof to the use of the poor in such town where the offence is committed; and no person, by reason of his being one of the said committee or an inhabitant of either of said towns, shall thereby be disqualified from being a witness in any prosecution for a breach of this act.—[March 10, 1788.]

AN ACT for altering a certain clause in an Act entitled, “An Act to prevent the destruction of Salmon, Shad and Alewives, and other Fish in Agawam or Westfield River”

[1786, p. 126.]

(Page 188.) Whereas by the said act no person or persons are allowed to catch any salmon, shad or alewives, with seines, nets, pots, or in any other way, within two miles of the entrance of the said river into Connecticut River, nor in Connecticut River within half a mile south or forty rods north of the mouth or entrance of the said Agawam into Connecticut River:

SECT. 1. *Be it enacted*, That the clause in the said act respecting catching fish in Connecticut River be, and the same is hereby so far altered and repealed as that any person or persons may catch fish in Connecticut River with seines, nets, pots, or in any other way or place, excepting within one hundred rods directly south of the entrance of the said Agawam into Connecticut River; anything in the said act to the contrary notwithstanding.—[March 26, 1788.]

AN ACT to prevent the Destruction of Alewives and other Fish in Ipswich River, and to encourage the increase of the same.

[Repeals all laws relating to fish passing up Ipswich River. 1788, p. 191; 1793, p. 451; 1797, p. 128; 1804, p. 431; 1805, p. 524; 1804, p. 1; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22.]

(Page 191.) SECT. 1. *Be it enacted*, That the owner or owners, occupier or occupiers of the dam across Ipswich River commonly called Warner's mill-dam, and also the owner or owners, occupier or occupiers of the dam of Farley's mill, so called, be and they are hereby required, henceforward, at their own cost and charge, in proportion to their several interests, to make and keep open a passage for the fish through their respective dams, from the twentieth day of April to the thirteenth day of June annually; and that the said passages be within four feet of the northerly end of each of the said dams, five feet wide, to enter from the under side of the cap-piece, which cap-piece shall be level with the said dam, and as low as the upper side of the mud-sills of the same; and that during the said time the bottom of the said passage be covered with flat stones or gravel in such manner as that the bottom be not raised higher than the sills; and that nothing shall be kept, put or placed on the upper side of either of said dams, nor anything put or placed below either of them, within six feet of the sluice-way on the southerly side of them, except a brace on the southerly side of each of the said sluice-ways, to guard the said cap-pieces, on penalty that the owner or owners, occupier or occupiers of either of the aforesaid mills neglecting to observe the directions of this act in any of the instances before mentioned, shall for every such offence forfeit the sum of twenty pounds, to be recov-

ered of them, or either of them, by action of debt in any court of record proper to try the same, in the county where the offence shall be committed, to be disposed of as follows, viz.: one moiety to him who shall sue for the same; the other moiety to the poor of the town where the offence shall be committed.

SECT. 2. *Be it further enacted*, That the owner or owners, occupier or occupiers of Dodge's Mills, so called, at the Little Falls on the said river, be and they are hereby required to keep open the passage over the said falls, from the grist-mill to a large rock in the angle of the falls or dam, down to the mud-sill, from the twentieth day of April to the thirteenth day of June annually, on penalty that the owner or owners, occupier or occupiers of the aforesaid mills neglecting to observe the directions of this act, shall for every such offence forfeit and pay the sum of twenty pounds, to be recovered of them, or either of them, by action of debt, in any court of record within the same county proper to try the same, one moiety thereof to him who shall sue for the same, the other moiety to the poor of the town where the offence shall be committed.

SECT. 3. *Be it further enacted*, That the sluices or passages through or by all other mill-dams now erected, or that shall hereafter be erected upon said river, or by any stream or streams running from any natural pond into the same, provided the said mill-dam be below the same ponds, shall be open, and kept open; and that the owners or owners, occupier or occupiers of such mill-dam, shall make, maintain and keep open the said sluices or passages at their own cost and charge, in the same manner as heretofore in this act is provided with regard to the passages through Warner's and Farley's mill-dam, and under the said penalty for every neglect, to be recovered and disposed of in the same manner.

SECT. 4. *Be it further enacted*, That every person who shall, after the twentieth day of April, which will be in the year of our Lord one thousand seven hundred and eighty-eight, presume to take any fish of any kind in the said river or its branches, or any of the ponds emptying themselves into the same, with seines or drag-nets of any kind, shall forfeit for every such offence, the sum of twenty pounds, to be recovered in any court of record proper to try the same, one moiety to him who shall sue for the same, the other moiety to the poor of the town where the offence is committed.

And whereas it has been found by experience, that saw-dust floating in streams where fish pass, obstruct their passage:

SECT. 5. *Be it further enacted*, That none of the saw-mills on said river, or any of the streams running from natural ponds into the said river, shall be suffered to go between the last day of April and the first day of June annually, for cutting any wood or timber; and every owner or occupier of such mill, who within the term aforesaid shall use or suffer the same to be used or employed for such purposes aforesaid, shall incur the penalty of twenty pounds, to be recovered and disposed of in the same manner as aforesaid.

SECT. 6. *Be it further enacted*, That from and after the passing this act, every town bordering on Ipswich River, where alewives and other fish go up to cast their spawn, shall, at their meeting in March or April, for the choice of town officers annually, choose at least three fit and suitable per-

sons, whose duty it shall be, jointly or severally, to see that this act be duly observed, and to inform against any person or persons that shall offend against the same; and all persons so chosen, shall be sworn to the faithful discharge of their duty in such office; and if any person chosen as aforesaid, shall refuse or neglect to be sworn, after due notice given, he shall forfeit and pay the sum of forty shillings, for the use of the poor of the town to which he belongs, to be recovered by the treasurer of such town in any court proper to try the same; and such town shall proceed to a new choice, and so *toities quoties*.

SECT. 7. *Be it further enacted*, That each and every person, who shall, from and after the twentieth day of April, to the thirteenth day of June annually, presume to take any of the said fish in the river aforesaid, or any of the streams running into the same, except on Monday, Wednesday and Friday, in each week during the time limited by this act, and in that case, not to be taken within two rods of any of the sluices aforesaid, shall forfeit and pay for every such offence a sum not exceeding forty shillings, nor less than twenty shillings, to be recovered on complaint or information, one moiety to the prosecutor, the other moiety to the poor of the town where the offence is committed: and the said committee shall be admitted as witness or witnesses on the trial.

SECT. 8. *Be it further enacted*, That all the laws heretofore made, relative to fish passing up Ipswich River, and for regulating the taking of the said fish, be and they hereby are repealed and made null and void.—[March 28, 1788.

AN ACT to prevent the Destruction, and regulate and limit the Catching of Fish in the Rivers and Streams in the Town of Westport, in the County of Bristol.

(Page 197.) SECT. 1. *Be it enacted*, That no seine or net shall be drawn at any time of the year anywhere in the rivers within the said town of Westport, below the south end of an island called Lake's Island, striking a line of an east and west course from the south end of said island, or within half a mile from the entrance of the harbor of said town; and that in the months of October and November, yearly, and every year, no seine or net shall be drawn any where in either of the rivers, arms or creeks within the said town; and if any person or persons, after the passing of this act, shall presume to draw any seine or net at any place or time, which is not allowed as above mentioned and described, he or they so offending, shall forfeit and pay the sum of three pounds for each offence, to be recovered by action of debt in any court proper to try the same; the one moiety thereof to him or them who shall sue for the same, and the other moiety to the use of the town of Westport; and every such seine or net, with its appendages so drawn, shall be forfeited to the use of said town.

SECT. 2. *Be it further enacted*, That the town of Westport shall be, and hereby are empowered and directed at their meeting for the choice of town officers in March or April, annually, to choose three or more suitable persons in the said town, to see that this act be duly observed; and each person so chosen, shall be sworn faithfully to discharge the duties required of him, agreeably to this act.—[June 18, 1788.

AN ACT for preventing the Destruction of Alewives in the town of Wellfleet, and regulating the Fishery of them in the said Town.

[Repealed 1836, ch. 56.]

(Page 200.) *SECT. 1. Be it enacted*, That it shall and may be lawful for the freeholders and other inhabitants of the town of Wellfleet, qualified by law to vote in town affairs, at their annual meeting by law appointed for the choice of town officers, to choose a committee of three or more persons, being freeholders of said town, to inspect the said fishery of alewives, who shall be duly sworn to the faithful discharge of their duty; and the said committee shall have full authority and power to meet, agree and determine upon rules and regulations respecting the taking the said fish, at what time, place or places the same shall be taken within the limits of the said town; and of the rules and regulations, agreed and determined upon by the said committee, or the major part of them, they shall cause fair copies to be posted up in three different parts of the said town, within fourteen days at the least, after their having been chosen as aforesaid, and shall also fix marks or bounds in the place or places allowed for fishing.

SECT. 2. Be it further enacted, That if any person or persons shall take any of the said fish in the rivers, streams or ponds, within the said town, at any other time or place than shall be allowed by the said committee as aforesaid, each person so offending, for each and every such offence, shall on conviction thereof, pay a fine not exceeding twenty shillings, nor less than five shillings, if the quantity of fish so taken is less than one barrel; but if the quantity so taken shall be one barrel or more, such person or persons so offending, shall forfeit and pay for each and every barrel of fish so taken, the sum of twenty shillings.

SECT. 3. Be it further enacted, That if the committee aforesaid, or either of them, shall detect any person in attempting to take any of the said fish, at any time, or in any place other than is allowed by the said committee as aforesaid, or shall find such fish with such person or persons, he or they shall be deemed to have taken the fish unlawfully, and shall be subject to the penalties of this act, as before mentioned, unless such person or persons can make it appear on trial, that they came by the said fish in some other way.

SECT. 4. Be it further enacted, That no person shall presume to take, catch, or haul on shore, any of the said fish within the limits of the said town, with any other nets than with scoop or dip nets, on pain and penalty of forfeiting for each and every offence, a sum not exceeding forty shillings, nor less than thirty shillings. And the said committee shall, during the passing of the said fish up the rivers and streams within the said town, as well as during the return of the said fish, and of the passing of their fry from the ponds to the sea, cause all obstructions to their passage, whether by wears, fences, walls, or otherwise, to be removed, and may make wider or deeper the said passage-ways, when they shall judge it necessary, the said committee paying a reasonable consideration therefor, if demanded; and shall have authority for those purposes, to go on the land or meadow of any person through which any of the said streams run, without being considered as trespassers; and any person who shall molest or hinder the said committee in the execution of their duty, or shall in any way or manner obstruct the passing of the said fish by wears, fences, walls, or otherways,

shall forfeit and pay a sum not exceeding forty shillings, nor less than thirty shillings.

SECT. 5. *Be it further enacted*, That no inhabitant of any other town than the said town of Wellfleet, shall catch or take any of the said fish in any of the rivers, streams or ponds within the said town of Wellfleet, without leave had therefor in writing, of the said town of Wellfleet, or of their said committee.

SECT. 6. *Provided, nevertheless*, That during the fishing season, any inhabitant of the neighbouring towns shall be supplied by the committee or some person by them appointed for that purpose, to the number of three hundred of the said fish, or any less quantity, if thereto requested, such inhabitant paying therefor at a rate not exceeding one shilling per hundred; and in case of neglect or refusal to supply such inhabitant as aforesaid, upon application of the aggrieved person to any justice within the county of Barnstable, not an inhabitant of Wellfleet, such justice may authorize and appoint some suitable person to catch and take the said fish, and supply the inhabitants of the neighbouring towns therewith, the person so appointed to conform to the rules established by the said committee, respecting the time and place of taking the said fish, and to be allowed by the said justice, from the sale of the fish he shall so take, a reasonable sum for his time and trouble; and if any overplus remain after being paid as aforesaid, the same shall be by him paid to the treasurer of the town of Wellfleet.

SECT. 7. *Be it further enacted*, That all fines and forfeitures incurred by any breach of this act, may be sued for and recovered before any justice of the peace in the said county of Barnstable; and all fines recovered for any breach of this act, shall enure, one moiety thereof to the said town of Wellfleet, and the other moiety thereof to him or them that shall sue for and recover the same. And no person, by reason of his being one of the said committee or an inhabitant of the town of Wellfleet, shall thereby be disqualified from being a witness in any prosecution for a breach of this act.—[June 19, 1788.

1789.

AN ACT to prevent the Destruction of Fish called Shad and Alewives, in Mystic River, so called, within the towns of Cambridge, Charlestown and Medford, and for repealing all laws heretofore made for that purpose.*

[An Act for continuing this Act and including Woburn and Malden, Feb. 27, 1794. Separate provision for Medford, Feb. 11, 1803. Additional Act, 1820, ch. 67.]

(Page 238.) Whereas the fishery in Mystic River, in the county of Middlesex, if properly regulated, will be of great public utility, as it serves to promote the cod fishery, and is also of advantage to the particular towns through which the river runs, affording, in some measure, subsistence and support to the inhabitants thereof, and it is, therefore, necessary to be preserved:

SECT. 1. *Be it enacted*, That the inhabitants of the towns of Cambridge, Charlestown and Medford, respectively, at a town meeting, to be held in the months of March or April, annually, at the time of choosing other town officers in their respective towns, be and they hereby are authorized and directed, to choose, for each of said towns, three suitable persons, in their

* Limited to five years.

respective towns, as a "Committee for the preservation of Fish," who shall be sworn to the faithful discharge of their duty; and the said committee, or the major part of them, in their own town, shall have full power and authority to cause the natural course of the said river, and the streams running into it, to be kept open and without obstruction, and to remove all such obstructions, as may be found therein; and to make the passage-way wider or deeper, if they shall find it necessary. And the said committee, or a major part of them, in their respective towns, shall have authority for such purposes, to go on the land of any person which may border on said river or streams, without being considered as guilty of a trespass; and to remove across such land any such obstructions, implements or tools, as may, in any way, impede, obstruct or hinder any fish from passing freely up and down said river or streams, otherwise than by this act is provided. And any person who shall hinder or obstruct said committee, or a majority of them, whether in crossing such land, or in executing any part of the business by this act assigned them, shall forfeit and pay for every such offence, a sum not exceeding three pounds, nor less than twenty shillings, to be recovered in any court, proper to try the same.

SECT. 2. *Be it further enacted*, That no shad or alewives shall be caught in any of the above mentioned towns, above Medford Bridge, in the said river or streams, or in Mystic Pond or Spy Pond, whether with a seine, drag-net, marsh-net, basket, or any other implement of that kind, or made to answer such purpose, except as is hereafter in this act provided. And every person offending herein, shall, upon due conviction, forfeit and pay the sum of three pounds, for every such offence, and shall also forfeit the implements or tools used in committing the offence. And no person shall, at any time, place any kind of obstruction in said river, streams or ponds, which may obstruct or hinder any shad or alewives from passing up or down the same. And no person shall be permitted, by disturbing the waters aforesaid, or by any other means, to restrain or interrupt any of those fish in their passage up and down said river and streams. And every person offending in either of these particulars, shall, upon conviction, forfeit and pay the sum of three pounds for every such offence; and every wear, net, or other obstruction, matter or thing, placed or used for such purpose, shall also be forfeited, if found in any of the waters aforesaid; and shall be disposed of by said committee or a majority of them, for the same purpose as the other forfeitures are to be applied to by this act, so far as the proceeds of the sale shall not be necessary for the particular appropriations in this act.

SECT. 3. *Be it further enacted*, That, in order to secure to said towns of Cambridge, Charlestown and Medford, their equal benefit from said fishery, the inhabitants of the town of Cambridge shall, within the limits of that town, have full right to catch with any kind of net, seine, or other fishing implement, any shad or alewives, on Monday, Tuesday and Friday, in every week, from the first day of March to the last day of June inclusively; and the inhabitants of Charlestown and Medford shall, in like manner, in their respective towns, have full right to catch any shad or alewives, in the waters aforesaid, on Monday, Wednesday and Friday, in every week included in said term.

SECT. 4. *Be it further enacted*, That any person, being an inhabitant of either of those towns, shall, each in his own town, in the river, streams

and ponds aforesaid, with any kind of fishing implement, on those days only, which are, with respect, to each of said towns before mentioned, have the right of catching said fish, between sun-rising on said days before mentioned, until sun-rising on the next day; and no obstruction, instrument or tool, shall be set, placed or used, for the purpose of hindering or catching of the fish aforesaid, in the waters aforesaid, till the sun shall be risen on said days; nor shall any such instrument be permitted to remain or be used in said river, streams or ponds, after the rising of the sun as afore-mentioned; and no such obstruction shall be allowed to be placed, used, or to remain in said river, streams or ponds, on any other days or times than is herein limited and prescribed; under the same penalties and forfeitures, to be incurred by any and every person placing or using the same, as are provided by this act, to be forfeited and paid by persons catching said fish, except as this act provides.

SECT. 5. *Be it further enacted*, That, if any inhabitant of any other town shall, at any time, take or hinder shad or alewives, within the limits of either of said towns, without leave first obtained from the selectmen of the town in which he shall take or hinder those fish, or unless the person taking or hindering them, shall be immediately in the employ or service and laboring for the benefits of some inhabitant of such town; every person so offending, shall, upon a due conviction, forfeit and pay the same penalties and forfeitures, as by this act are provided against persons taking, obstructing or hindering said fish, at any other times than those particularly permitted.

SECT. 6. *Be it further enacted*, That the said committee, or a majority of them, in their respective towns, shall have full authority to execute this act, so far as relates to seizing, removing, and selling any implements or tools, used for hindering, taking, disturbing or turning back the fish in said river, streams or ponds; and in and after the execution of said trust, they shall not be considered as guilty of a trespass therein; nor shall any action lie against them, or either of them, for any necessary damage done to the lands or fences of any person, in executing said trust; but if the proceeds of the sale of said implements, or other materials, shall be found insufficient to defray all the necessary charges, and the reasonable fees of the committee, not exceeding four shillings to each committee-man, for each day so spent by him, and all reasonable and necessary assistance; then the remainder of such damages and costs shall be recovered in an action of debt, to be brought by the persons to be benefited by the same; whether committee-men, or persons owning lands or fences damaged, with all the costs of suit against the person committing the offence, in any court proper to try the same, within the county of Middlesex. And the said committee, or any other person, may sue for and recover, upon due and legal conviction, in any court proper to try the same, all penalties which shall arise, or become due in their respective towns, for any breach of this act, either upon action of debt, or upon indictment or information; one-half of the penalty to accrue to the person recovering the same, the other half to be paid to the treasurer of the town where the offence was committed, for the use of the poor of the same town.

SECT. 7. *Be it further enacted*, That all fines and penalties that may be incurred for a breach of this act, not exceeding four pounds, may be sued for and recovered before any justice of the peace for the county of Middle-

sex, saving the right of appeal, to any person aggrieved by the sentence of said justice, to the court of general sessions of the peace, next to be holden for said county.

This act to be in force for the space of five years, from the first day of March next, and no longer.—[February 16, 1789.

1789.

AN ACT in addition to an Act passed the last year, entitled "An Act for the preservation of the Fish called Alewives, in Mattempoiset River, in Rochester, in the County of Plymouth, and for regulating the taking the said Fish in the said River."

[March 1, 1788. Additional Acts, 1791, p. 290; 1803, p. 91; 1810, ch. 60; 1814, ch. 99; 1817, ch. 136.]

(Page 247.) Whereas it is provided in and by the said act, that the owner or owners of each and every mill-dam on said river, shall make, provide and continue a sluice-way of three feet wide and eight inches deep, for the said fish to pass their respective dams, as low as the selectmen of the said Rochester shall judge convenient for the said fish to pass in; and the selectmen of the said town of Rochester be authorized to open said sluice-ways on the second Monday of April, annually, in order to let the said fish pass the said dams. And whereas it is found, by experience, that the keeping of said sluice-ways shut till the second Monday in April, annually, greatly impedes the course of said fish:

SECT. 1 *Be it enacted*, That from and after the passing this act, the selectmen of the said town of Rochester are hereby authorized, on any day between the last day of March and the second Monday of April, annually, to open the said sluice-ways, which, when opened by them, shall remain open until the twentieth day of May, annually, under the same penalty as is provided in said act, for said sluice-ways being stopped between the second Monday of April and the twentieth day of May.

SECT. 2. *Be it further enacted*, That, if any person shall presume to take any of said fish in the brook, leading out of Little Long Pond (so-called) into Snipuet Pond, such person shall be subject to the same penalty as is provided in said act for taking fish in said Mattempoiset River at a time not allowed by the committee of said town to take said fish in said river. And whereas there is no provision made in said act to prevent persons taking said fish in said river, or by seines in a part of the harbor therein described, before the tenth day of April, annually:

SECT. 3. *Be it further enacted*, That if any person shall presume to take any of said fish in said river, or to stretch any seine in that part of the harbor into which said river empties which is described in said act, between the last day of March and the tenth day of April, annually, such person or persons shall be subject to the same penalty as is provided by said act for doing the same between the tenth day of April and the twentieth day of May.

SECT. 4. *Be it further enacted*, That the inhabitants of the said town of Rochester, at a legal town-meeting warned for that purpose, may sell, or dispose of, on such terms and in such manner as they may think proper, the exclusive right of taking said fish in said river, for any number of days, not exceeding three in each week, no one sale to be for a longer term than one year. And, whereas, by reason of the swamp and thickets through which

said river runs, it may be very difficult to procure proof of the violations of this act, and the act to which this is an addition : Therefore,

SECT. 5. *Be it enacted*, That if the committee of said town, or any member thereof, shall detect any person attempting to take said fish, on any day, in any place or in any manner other than is allowed by said committee, and said person has any of said fish in his or her custody, or if the said committee, or other member of said town, shall find any such fish in any person's custody, near to, or coming from said river, such person shall be deemed to have taken such fish illegally, and shall be subject to the penalties provided by this act, and the act to which this is an addition, unless such person can give a satisfactory account how he or she came by such fish.

SECT. 6. *Be it further enacted*, That any member of the committee of said town of Rochester, appointed in consequence of said act, may bring forward an action of debt, for the recovery of the penalty or penalties provided in said act, or in this act, in his own name, and the name of the said town of Rochester, and shall be entitled to one-half the sum or sums so recovered, anything in said act to the contrary notwithstanding.—[June 15, 1789.

AN ACT for reviving and continuing Sundry Laws that are expired or near expiring.

(Page 249.) Whereas, the several acts hereafter mentioned, which are now expired, or near expiring, have been found useful and beneficial, viz. : An Act made in the year of our Lord one thousand seven hundred and seventy-three, entitled "An Act for regulating the Alewife fishery in the town of Halifax, in the county of Plymouth."

AN ACT regulating the taking of the Fish called Alewives, in the Town Brook, so called, in the Town of Plymouth.*

(Page 250.) SECT. 1. *Be it enacted*, That said fish may be taken between the two grist-mills now standing on said brook, and shall not be taken in any other part thereof, and at such time or times only as a committee who may be appointed by said town, as is hereafter provided, may direct.

SECT. 2. *Be it further enacted*, That the inhabitants of said town of Plymouth, at their meeting for the choice of town officers in March or April annually, be and they hereby are authorized and directed to appoint five or seven persons a committee to oversee the taking said fish as aforesaid, which committee shall distribute the said fish taken by them, or under their direction, as equally as circumstances will admit, to such of the inhabitants of said town as may apply for the same, and for the fish so supplied and delivered the committee aforesaid shall demand and receive, of the person or persons applying therefor, payment at such rate or rates as the inhabitants of the said town at their annual meeting in March or April may direct, excepting of such poor persons as may be named in a list annually to be made out by the selectmen of said town, and who, in the opinion of the selectmen, are unable to pay for the same, which list shall be given to the committee, and the person or persons borne on the same shall be supplied with such quantities of said fish, gratis, as the committee may think expedient.

* Extended to Fresh Pond Brook, June 25, 1798.

And the committee aforesaid shall have such allowance for their services as the inhabitants of said town, at the time of appointing said committee, shall determine, and shall annually, in the month of September next following their appointment, exhibit their accounts to the selectmen of said town for settlement and allowance, and pay the balance remaining in their hands, if any, to the treasurer of the town of Plymouth, for the town's use.

SECT. 3. *Be it further enacted*, That the said committee, or the major part of them be and are hereby authorized and empowered to open any dam, or the sluice of any mill or other water-works erected, or that may be erected on or over said brook, at the expense of the owner or owners of such dam or sluice, provided such owner or owners shall neglect to open the same when thereto required by said committee, or the major part of them as aforesaid; and the dam or sluice that may be so opened, shall continue open to such depth and width, and for so long a time, as the said committee, or the major part of them may judge necessary; and if any person or persons shall obstruct the passage-ways allowed or ordered by said committee, or the major part of them, in any dam or sluice-way, or shall obstruct the passage of said fish in any part of said brook than is permitted by this act, such person or persons so offending, shall forfeit and pay a sum not exceeding fifty pounds, nor less than ten pounds.

SECT. 4. *Be it further enacted*, That if any person or persons, other than the said committee, or such persons as shall be by them employed shall take any of the said fish in the said brook, or any part of it, at any time, or by any ways or means whatsoever, each person so offending shall forfeit and pay a sum not exceeding forty shillings, nor less than ten shillings, for every such offence.

SECT. 5. *Be it further enacted*, That all penalties incurred by the breach of this act may be sued for and recovered by the treasurer of the town of Plymouth, for the time being, in any court in the county of Plymouth proper to try the same; and all sums so recovered shall be appropriated to the use of the said town; and in case any minor or minors shall offend against any part of this act, and thereby incur any or either of the penalties aforesaid, in all such cases the parents, master or guardians of such minor or minors shall be answerable therefor; and in case of a prosecution of such minor or minors for any such offence, the action shall be commenced against the parents, masters or guardians of such minor or minors, respectively, and judgment be rendered against any parent, master or guardian in such case, in the same manner as for his or their personal offence.

SECT. 6. *Be it further enacted*, That no person by reason of being an inhabitant of said town, or one of said committee, shall be thereby disqualified from being a witness in any prosecution for a breach of this act.—[June 20, 1789.]

1790.

AN ACT empowering the Town of Pembroke to regulate and order the taking and disposing of the Fish called Alewives, within the limits of the said Town.

[Repeals all laws heretofore made for regulating the Alewife fishery in the town of Pembroke, Additional Acts, 1792, p. 326; 1811, ch. 72; 1814, ch. 128; 9th section of this Act repealed, ch. 72, 1811.]

(Page 269.) Whereas the town of Pembroke, in the county of Plymouth, hath been at considerable expense and charge in opening a passage for the

fish called alewives, from the sea into the ponds called the Indian Ponds, being wholly within the bounds of the said town, it is but reasonable and just that the ordering of the taking of the said fish, and the disposition of them, when taken, should be wholly vested in the said town. And whereas, an act heretofore made for that purpose has been found inadequate to the purposes thereby intended :

SECT. 1. *Be it enacted*, That it shall and may be lawful for the inhabitants of the said town of Pembroke, at a meeting legally and regularly assembled for that purpose, from time to time, and at all times hereafter, to determine and order how, in what manner, by whom and at what place or places, time or times in the year, said fish may be taken within the town aforesaid, and shall cause a copy of such order, attested by the town clerk, to be posted up in some public place in said town, whereunto all persons shall conform with regard to the taking and disposing of said fish, on penalty that the offender against the same shall forfeit and pay a sum not exceeding three pounds, nor less than forty shillings, for each offence, at the discretion of the justice before whom the same shall be tried.

SECT. 2. *Be it further enacted*, That the inhabitants of the town of Pembroke shall be, and hereby are, empowered and directed annually to choose three or more persons, being freeholders in the said town, to see that this act be duly observed, agreeably to the directions of said town; and each person so chosen shall be sworn faithfully to discharge the duties required of him by this act; and the said committee are hereby authorized and empowered to cause the natural course of the stream, through which the said fish pass, to be kept open and without obstruction, and to remove any such as may be found therein; and the said committee, or either of them, shall have authority, for those purposes, to go on the land or meadow of any person through which such stream runs, without being considered as trespassers; and any person who shall hinder or molest said committee, or either of them, in the execution of his or their office, or shall obstruct any passage-way in said rivers or streams within the said town of Pembroke, otherwise than may be allowed of by the said town, he or they shall forfeit and pay a fine for every such offence, not exceeding the sum of five pounds, nor less than three pounds.

SECT. 3. *Be it further enacted*, That if the committee, or either of them, shall detect any person or persons in attempting to take any of the said fish at any time, or in any place, or in any manner, otherwise than is allowed by the said town, or shall find such fish with such person or persons, they shall be deemed to have taken the said fish unlawfully, and shall be subject to the penalties of this act accordingly, unless such person or persons can make it appear on trial that they came by the said fish in some other way.

SECT. 4. *Be it further enacted*, That the said committee be empowered, and are hereby empowered and authorized, to open the sluice-ways through any dam or dams that are or may be erected within the town of Pembroke, on the stream leading out of the great ponds, at the expense of the owner.

SECT. 5. *Be it further enacted*, That no person shall be considered as disqualified from being a witness on any trial that may be had pursuant to this act, on account of his belonging to or being an inhabitant of the said town of Pembroke.

SECT. 6. *Be it further enacted*, That if any servant or minor shall be

found taking any of said fish in anywise contrary to this act, or contrary to the rules and orders of said town of Pembroke as aforesaid, the parents, masters or guardians of such minors or servants shall be liable for the fines and forfeitures incurred by a breach of this act, or the rules and orders of the town aforesaid.

SECT. 7. *Be it further enacted*, That in case any poor or indigent person or persons shall be found taking any of the said fish contrary to this act, or contrary to the rules and orders of said town of Pembroke, it shall be lawful for the committee or overseers of said brook, chosen as aforesaid, to take from such poor or indigent person or persons their net or nets, with which they may be found taking said fish, and detain them in their custody for the space of one month, or until they do appear and pay the fines and forfeitures arising by the breach of this act and the orders of the town aforesaid; and in case the said poor person or persons do not appear and pay the fines and forfeitures as aforesaid, within one month as aforesaid, the said net or nets shall be forfeited to and for the use of the poor of the said town of Pembroke.

SECT. 8. *Be it further enacted*, That no person or persons, at any time between the first day of April and the fifteenth day of June annually, shall enter the river commonly called and known by the name of Barker's River, above where said river adjoins to Indian Head River, so called, with an intent to drive, seine or otherwise disturb the fish in said river where the tide ebbs and flows, on penalty of five pounds for each offence, to be recovered in manner hereafter mentioned.

SECT. 9. *Be it further enacted*, That no person or persons shall presume to set, draw or cast any seine, drag or set-net, of any dimensions whatsoever, in the North River, so called, except on the Monday and Friday of each week, and that between the sun's rising and setting of each day; and that no seine, drag or set-net shall be set, drawn or cast in said river above what is commonly called and known by the name of the Third Herring Brook, or Smelt Brook.

SECT. 10. *Provided, nevertheless*, That the inhabitants of the several towns adjoining the said river are hereby permitted and allowed to set set-nets or scoop-nets at North River Bridge, so called, on the Monday and Friday evenings of the said days in each week, from eight of the clock in the afternoon to ten of the clock in the evening of the same day, between the first day of April and the fifteenth day of May annually, on the penalty of five pounds for each offence.

SECT. 11. *Be it further enacted*, That all fines and forfeitures accruing for any breach of this act shall be one half to the use of the poor of the said town of Pembroke, and the other half to him or them who shall sue and prosecute for the same, to be recovered by action of debt in any court proper to try the same. And all former laws heretofore made for the regulation of the alewife fishery in the town of Pembroke, are hereby repealed.—[February 26, 1790.]

AN ACT to regulate the catching of Shad, Salmon and Alewives, and to prevent Obstructions in Merrimack River, and in the other Rivers and Streams running into the same, within the Commonwealth, and for repealing several Acts heretofore made for that purpose.

[Additional Acts, 1790, p. 272; 1793, p. 442; 1794, p. 511; 1803, p. 43; 1795, p. 35; 1804, p. 441; 1805, p. 577; 1807, p. 56; 1809, p. 223.]

(Page 272.) SECT. 1. *Be it enacted*, That an act passed in the year of our Lord one thousand seven hundred and eighty-three, entitled "An Act to regulate the catching Salmon, Shad and Alewives, and to remove and prevent obstructions in Merrimack River, and in the other rivers and streams running into the same within this Commonwealth, and for repealing several acts heretofore made for that purpose," together with the several subsequent acts in addition thereto, be and are hereby repealed, except so far as may relate to any action, indictment or information which have been already commenced for the breach of the same.

SECT. 2. *Be it further enacted*, That no person or persons whatever be allowed, from and after the passing this act, to catch any salmon, shad or alewives in any part of Merrimack River, or in any river or stream centering to and running into the same, within this Commonwealth, oftener or more than three days in a week, the days to be Monday, Tuesday and Wednesday in each week, and from sunrise on Monday morning to sunrise on Thursday morning. And if any person or persons shall catch any salmon, shad or alewives in Merrimack River, or any river or stream centering to or running into the same, or shall drag any seine or drag-net, or set any net or pot, or use any other machine for the purpose of catching any of the said fish in the said rivers and streams, and within this Commonwealth, at any other time or place than by this act is allowed, each and every person so offending shall forfeit and pay for each offence a fine not less than thirty shillings, nor more than four pounds, at the discretion of the court before which trial shall be had, according to the aggravation of the offence, and the seine, net, pot or other machine so used shall be forfeited.

SECT. 3. *Be it further enacted*, That if any person or persons shall erect any obstruction or incumbrance in or across the said Merrimack River, or in any of the rivers or streams running into the same, or continue such as are already erected, so as to prevent the free passage of the said fish up and down the said rivers and streams, he or they so offending shall forfeit and pay a fine of twenty pounds.

SECT. 4. *Be it further enacted*, That no person or persons, from and after the passing of this act, shall at any time catch any salmon, shad or alewives with seines, nets, pots or in any other way, at the mouth or entrance of the aforesaid streams or rivers (or within eighty rods of the same, up such rivers or streams, nor in the mouth of Concord River below Tyler's or Spaulding's mill-dam), in which such fish usually go up to cast their spawn, nor in any pond from which such rivers or streams proceed, nor in any brook or rivulet that run into such ponds; and any person or persons so offending shall for each offence forfeit and pay a fine not less than thirty shillings, nor more than four pounds, at the discretion of the court before which trial shall be had, according to the aggravation of the offence; and the seine, net, pot or other machine used in catching the same shall be forfeited.

SECT. 5. *Be it further enacted*, That if any person or persons shall fish with a seine or net exceeding eighteen rods in length, or extend more than one seine or net on the same fishing ground, at one and the same time, he or they shall for each offence forfeit and pay a fine of four pounds, and such seines or nets shall be forfeited.

SECT. 6. *Be it further enacted*, That from and after the passing this act, every town in this Commonwealth bordering on Merrimack River, and in which there are any ponds, rivers or streams centering to or emptying themselves into Merrimack River, where salmon, shad or alewives do or would (if not obstructed) go up to cast their spawn, shall at their annual meeting in the month of March or April annually, choose by ballot, at least four suitable and fit persons as fish-wardens, whose duty it shall be jointly and severally to see that this act, and the act for keeping open sluice-ways in dams, be carried into effect, and to inform against any person or persons that shall offend against the said acts, and to examine and measure seines and nets used in catching the said fish, and to see that all obstructions in the rivers and streams aforesaid be removed, and to prosecute all breaches of the said acts. And all persons chosen fish-wardens as aforesaid shall be sworn to the faithful discharge of the duties of their office; and when so sworn, they shall have power to pursue, and they are hereby authorized to pursue and execute the duties of their said office, in any town or place within this Commonwealth where this act can operate or have force. And if any person chosen as aforesaid shall refuse or neglect to be sworn to the faithful discharge of the duties of the said office, he shall forfeit and pay a fine of forty shillings for the use of the poor of such town, to be recovered by the town treasurer; and such town shall proceed to a new choice, and so *toties quoties*. And any person who shall prevent any fish-warden from measuring any seine or net which shall be used for the purpose of taking fish in the said rivers and streams, shall forfeit and pay the sum of four pounds. And if any of the towns aforesaid shall neglect to choose fish-wardens annually, agreeably to the true intent of this act, such town shall forfeit and pay a fine of fifty pounds, for the use of the county in which such delinquent town lies.

SECT. 7. *Be it further enacted*, That if any fresh salmon, shad or alewives shall be found with or in the possession of any person or persons whatever within three miles of any of the said rivers or streams, and within this Commonwealth, at any other time than that allowed by law for catching the said fish in the said rivers and streams, such person or persons shall be held and accounted in law to be guilty of catching such fish contrary to the true intent and meaning of this act, and shall pay a fine accordingly; unless such person or persons shall make oath in the court before whom the trial is had, that the said fish were actually caught within the time allowed by law for catching the same, or make proof who was the person or persons that caught such fish, or who sold the same.

SECT. 8. *Provided, always*, That every justice of the peace to whom complaint shall be made against any person or persons for having in his or their possession any fresh shad, salmon or alewives, as aforesaid, shall, before he issues his warrant against the person or persons complained of, cause the complainant to make oath to his complaint, and that he really believes such fish were caught at a time prohibited by law for catching the same.

SECT. 9. *And be it enacted*, That any of the said fish-wardens, grand jurors, sheriffs, deputy sheriffs, or constables, shall have a right to seize any seine, net, pot or other machine, employed in any of the said rivers or streams for the purpose of catching the said fish at any other time or place than such as are allowed by this act. And any person or persons that shall prevent such fish-warden, grand juror, sheriff, deputy sheriff, or constable, from such seizure, or shall rescue any seine, net, pot or other machine from such officer, when seized, shall, on conviction thereof before a justice of the peace, pay a fine not less than thirty shillings nor more than four pounds, and shall be liable to answer to the seizing officer, in an action of trespass, for double the value of such seine, net, pot or other machine.

SECT. 10. *Be it further enacted*, That when any seine, net, pot or other machine shall be employed for the purpose of catching fish, at any time or place not allowed by this act, and shall be seized by any of the officers aforesaid, it shall be the duty of such officer to give information to some justice of the peace within the county wherein such seine, net, pot or other machine was found employed as aforesaid; a copy of which information, containing the times when and the place where such seine, net, pot or other machine was seized, shall, by order of such justice, be posted up in some public place in each of the two towns next adjoining the place where such seine, net, pot or other machine was seized; and also a notification to all persons interested in such seine, net, pot or other machine, to appear before the said justice, at a time therein named (which shall be within fourteen days, and shall not be less than seven days from the time of posting up the notification), to show cause, if any they have, why such seine, net, pot or other machine should not be forfeited; and if, upon trial, the claimer or claimers shall produce sufficient evidence that he and they were ignorant of the unlawful use of their seine, net, pot or other machine, and shall give information of the person or persons unlawfully using the same, the seine, net, pot or other machine, seized as aforesaid, shall be restored to the claimer or claimers thereof. And the person or persons convicted of using the same without the consent of the owner, shall, in addition to the penalty in this act provided for fishing on days not herein allowed of, pay another fine of twenty shillings each, or suffer imprisonment in the common gaol, not exceeding twenty days; but in all cases where the owner or owners shall not produce evidence of the person or persons offending, their seine, net, pot or other machine shall be adjudged forfeited.

SECT. 11. *Be it enacted*, That on complaint, made to any justice of the peace for the county where any offence against this act shall be committed, against any person or persons for breach of this act, or upon view of any justice of the peace, such justice is hereby empowered to issue his warrant, directed to a proper officer, to apprehend such offender or offenders, and bring him or them before him, or some other justice of the peace in the same county, to answer for the offence.

SECT. 12. *Be it further enacted*, That all fines and forfeitures, incurred by breach of this act, where the fine, exclusive of the net, seine, pot or other machine used in such breach, doth not exceed four pounds, shall be recovered before any justice of the peace in the county where the offence is committed; an appeal being allowed, to either party, to the court of general

sessions of the peace, next to be holden in and for the same county : *provided*, such appeal is claimed in open court, within one hour after judgment is declared : *provided, also*, that the appellant recognize with sufficient sureties to prosecute his appeal to effect, and abide the final judgment thereon; and the justice shall bind over the witnesses against such offending person or persons; and in case of conviction before the justice, and no appeal had, the person or persons so convicted, shall, upon neglect to pay to the justice the fine so laid on him or them, and legal costs, be committed to the gaol of the county, there to remain until payment be made; and all fines, upwards of four pounds, exclusive of the seine, net, pot or other machine, shall be recovered by bill, plaint or information in any court within this Commonwealth proper to try the same.

SECT. 13. *Be it enacted*, That it is hereby made the duty of all grand jurors, sheriffs, deputy sheriffs and constables, diligently to inquire after and duly to prosecute all breaches of this act. And the testimony of any fish-warden, duly chosen and sworn as aforesaid, grand jurors, sheriff, deputy sheriff or constable under oath, in court, shall be sufficient evidence to convict any person of a breach of this act, unless such testimony be invalidated by other sufficient witnesses.

SECT. 14. *And be it enacted*, That all fines and forfeitures incurred by breach of this act, not otherwise appropriated, shall enure, one moiety thereof to the poor of the town where the offence shall be committed, and the other moiety to him or them who shall make information of the same.

SECT. 15. *Provided, always*, That the said fish may be taken in the mouth of Concord River, with nets and seines, below Tyler's and Spaulding's mill-dam, two days in a week, the days to be Tuesday and Wednesday, from sunrise on Tuesday to sunrise on Thursday.

SECT. 16. *And be it enacted*, That the fish officers which may be chosen, by virtue of the acts which this act repeals, by any town prior to their knowledge of this act, shall have and exercise the same powers as are delegated to fish-wardens by this act.—[March 4, 1790.

AN ACT for the Preservation and Increase of the Fish called Alewives, in Acquesnet River, in the Town of New Bedford, in the County of Bristol, and for regulating the taking the said Fish in the said River.

(Page 283.) SECT. 1. *Be it enacted*, That the owner or owners of each and every mill-dam on the said river, shall make provide and continue a sluice-way of two feet wide and eight inches deep, for the said fish to pass their respective dams, as low as the selectmen of the said town of New Bedford shall judge convenient for the said fish to pass in; and the selectmen of the said town of New Bedford are hereby authorized, on the second Monday of April, annually, to open the said sluice-ways, which, when opened by them, shall remain open until the twentieth day of May, annually; and the owner or owners of any dam on the said river, who shall neglect or refuse to make, provide and continue a sluice-way as aforesaid, or who, after such sluice-way is opened as aforesaid, shall shut or obstruct the same during the term the said sluice-way is to be kept open as aforesaid, shall forfeit and pay the sum of forty pounds for each offence.

SECT. 2. *Be it further enacted*, That the said town of New Bedford, at their annual meeting for the choice of town officers, in the months of March

or April, annually, are hereby authorized to choose a committee, consisting of not more than twelve nor less than three suitable, discreet persons, for inspectors of the said river; whose duty it shall be, within four days after their appointments, to post up, in four public places in the said town nearest the said river, a notification, under their hands, or the major part of them, pointing out the times when and places where the said fish may be taken in the said river; and if any person shall pull down or deface such notification, he or she shall, for each offence, forfeit and pay ten shillings; and if such committee shall neglect or refuse to post up such notification within the said term of four days, such committee shall forfeit and pay ten shillings; and any person who shall presume to take any of the said fish, in the said river, except at the times and places appointed by the said committee, as aforesaid, shall forfeit and pay three pounds for each offence.

SECT. 3. *Be it further enacted*, That if any person or persons shall make any weirs or other obstructions to hinder the passage of the said fish up the said river, each person so offending shall forfeit and pay the sum of four pounds; and any person who shall take or catch any of the said fish in the said river with any other instrument than a dip net, shall forfeit and pay forty shillings for each offence.

SECT. 4. *Be it further enacted*, That all the forfeitures mentioned in this act shall accrue to the said town of New Bedford, to be recovered by the treasurer of the said town, in an action of debt, in any court proper to try the same; and no person shall be considered as disqualified from giving evidence in any such action, on account of his living in or being an inhabitant of the said town of New Bedford.

SECT. 5. *Be it further enacted*, That any agreement which may be made and entered into, between the said town of New Bedford and the owner or owners of any dam on the said river, with regard to the premises, shall be good and valid in law.—[June 19, 1790.

1791.

AN ACT to repeal in part an Act, entitled "An Act to prevent the Destruction of Fish called Shad and Alewives, in Ten and Three Miles Rivers, in the County of Bristol."*

(Page 287.) Whereas the act entitled "An Act to prevent the destruction of fish called shad and alewives, in Ten and Three Miles Rivers, in the county of Bristol," appears not to be of public utility, so far as the same act respects the said river called Three Miles River:

SECT. 1. *Be it therefore enacted*, That the said act to prevent the destruction of the fish called shad and alewives, in Ten and Three Miles Rivers, shall be and the same is hereby repealed and declared null and void, from the time of passing this act, as to all matters therein required or authorized to be done respecting the river called Three Miles River, saving only, that all acts and doings heretofore lawfully performed by virtue of the said act shall and may be justified thereby, this repeal notwithstanding.—[Feb. 11, 1791.

* March 10, 1788.

AN ACT for the more effectual Carrying into Execution the Laws regulating the Alewife Fishery in Mattepoiset River, in the Town of Rochester.*

[1803, p. 91; 1810, ch. 60; 1814, ch. 99; 1817, ch. 136.]

(Page 290.) SECT. 1. *Be it enacted*, That each and every person who, according to law, shall be chosen an inspector of Mattepoiset River, shall, within six days after his being notified by a constable of the town of Rochester of his being so chosen, take the following oath before the clerk of said town, or some justice of the peace for the county of Plymouth, viz.:

You, A. B., being chosen an inspector of Mattepoiset River for the year ensuing, do swear that you will prosecute all breaches of the laws for the regulating the alewife fishery in said river, the year ensuing, which shall come to your knowledge. *So help you God.*

SECT. 2. *Be it further enacted*, That if any person who shall be chosen an inspector of said river, as aforesaid, shall neglect to take said oath for the space of six days after he is notified of his being so chosen as aforesaid, he shall forfeit to the use of the said town of Rochester thirty shillings, to be recovered by the treasurer of said town in an action of debt, in any court proper to try the same.—[Feb. 23, 1791.]

AN ACT for regulating the Fishery in Connecticut River.

(Page 296.) SECT. 1. *Be it enacted*, That no person or persons shall, between the fifteenth day of March and the fifteenth day of June, in any year, set or draw any seine or seines, or any other machine, for the purpose of catching fish in Connecticut River, or in any river or stream falling into the same, from the rising of the sun on Saturday morning until the rising of the sun on Tuesday morning. And every person that shall be convicted of any breach of this act shall forfeit the sum of ten pounds, and also the value of the seine and other machines or utensils used in fishing as aforesaid, to be recovered by any person who shall sue for the same before any court having jurisdiction thereof. And all acts heretofore made for regulating the fishery in the rivers and streams aforesaid are hereby repealed.—[March 7, 1791.]

1792.

[Repealed, 1815, chap. 111.]

AN ACT to regulate the taking of Fish called Alewives in the Town of Middleborough, in the County of Plymouth, and for repealing a certain Law made for that purpose, in the year of our Lord one thousand seven hundred and forty-nine.

[Additional Acts July 8, 1798; Jan. 21, 1802. Repeals Act of 1749; revived and made perpetual March 7, 1797. Again repealed June 22, 1797. The Act 1764 made perpetual March 7, 1797.]

(Page 313.) Whereas the laws already made for regulating the taking fish called alewives, at the places called the Old Stone Ware and Assawomset Brook, in said town, are found inconvenient. For remedy whereof,

SECT. 1. That from and after the passing this act, it shall and may be lawful for the inhabitants of said town, annually, to farm or hire out the privilege of taking said fish at the place called the Old Stone Ware, and at such place in Assawomset, in said town, as the inhabitants thereof shall vote and order, to such person or persons as shall appear to give most for

* June 15, 1789, and March 1, 1788.

said privilege, four days in a week, at said Stone Ware, viz.: Tuesday, Wednesday, Thursday and Friday; and at Assawomset Brook three days in a week, viz.: Monday, Tuesday and Wednesday, beginning at midnight preceding Tuesday, and ending at midnight succeeding Friday, at said Stone Ware, and at midnight preceding Monday, and ending at midnight succeeding Wednesday, at said Assawomset Brook; said fish to be taken at said Stone Ware with scoop-nets only; and at said Assawomset Brook with scoop-nets or set-nets only.

SECT. 2. *Be it further enacted*, That the purchasers of said privilege shall not ask or receive for said fish when taken, more than one shilling per hundred,* and in that proportion for a greater or smaller quantity; and that the purchasers of said privilege shall be obliged to sell said fish at that rate, at all times when they shall have any on hand, when applied to, upon the penalty of five pounds, to be recovered by action of debt, in any court proper to try the same, for each neglect or refusal; one moiety thereof to the use of the poor of said town, and the other moiety to the use of any person who shall prosecute for the same; and it shall be the duty of the inhabitants of the said town, annually, to provide for such of the poor inhabitants thereof as shall be unable to procure them for themselves, such quantities of said fish as shall be thought necessary, who shall receive the same gratis; and in order thereto,

SECT. 3. *Be it further enacted*, That said inhabitants shall choose a committee of nine discreet, judicious men, one in each constable's district in said town, in the fall of the year annually, who shall report to the overseers of the poor of said town, previous to the ensuing spring, the number and names of such poor inhabitants, the number in each family, and their situation; and it shall be the duty of such overseers to apportion to every such family such quantity of said fish as they in their discretion shall think necessary, and shall draw their orders on the purchasers of said privilege for the same, which orders shall be taken and received by said purchasers, equal to money, and shall be received of them by the treasurer of said town equal to money, in discharge of the purchase money of the privilege aforesaid.

SECT. 4. *Be it further enacted*, That any person who shall presume to take any of the said fish in any other way, at any other time, or any other place in said river or brook, or any parts or dependencies thereof, than those prescribed by this act, every person concerned therein shall forfeit and pay for each offence the sum of forty shillings, to be recovered by action of debt in any court proper to try the same, one moiety thereof to the treasurer of said town for the use of the poor thereof, and the other moiety to the party who shall sue therefor.

SECT. 5. *Be it further enacted*, That the scoop-net, or other instrument by which any person shall take or attempt to take any of said fish contrary to the true intent and meaning of this act, shall be forfeit, and any other person shall have liberty to seize and secure the same to his own use; and if said scoop-net or other instrument, forfeited as aforesaid, shall be carried away, concealed or withheld, so that the party attempting cannot take or come at the same, said party so attempting to take said instrument may sue for and recover the value thereof in a special action of the case, before

* The price fixed by this Act repealed Feb. 8, 1798.

any court having proper jurisdiction thereof, against the owner or possessor thereof to his own use.

SECT. 6. *Be it further enacted*, That if any person shall be found near said river or brook, or going from thence, with any quantity of said fish exceeding sixty in number, which are suspected to have been taken in violation of this act, it shall be the duty of every person who shall then suspect said fish to have been taken illicitly to examine the possessor thereof respecting the means of his procuring them; and if he cannot make it appear that he came by them legally, he shall forfeit the whole of said fish that he shall so be possessed of, to be recovered in the same way and manner as scoop-nets and other instruments are recovered, as provided in this act, and be subject to the penalty of forty shillings for taking fish contrary thereto, to be recovered in the same way as is herein before provided in that particular; and to prevent difficulty and unnecessary expense to persons purchasing said fish, it shall be the duty of the clerk of, or some one of the purchasers of said privilege to give a certificate under his hand, to all persons who purchase any quantity of said fish, exceeding sixty in number, of the time when, and the place where, and the quantity purchased, and his producing said certificate shall be evidence of his obtaining said fish legally.

SECT. 7. *Be it further enacted*, That if any children or servants shall offend against this act, unless their parents, masters or guardians, or some other person in their behalf, shall pay the penalty set against such offenders within twelve hours after notice being given them of such offence, such children or servants shall be proceeded against by complaint before any justice of the peace in and for said county, and upon conviction thereof shall be committed to the house of correction, there to remain not less than five nor more than twenty days, according to the nature of said offence, in the judgment and at the discretion of the court or justice before which said conviction may be had.

SECT. 8. *Be it further enacted*, That all persons not otherwise disqualified shall be considered and taken to be competent and legal witnesses in any prosecution upon this act, they being inhabitants of said town of Middleborough, notwithstanding.

SECT. 9. *Be it further enacted*, That an act passed in the year of our Lord seventeen hundred and forty-nine, entitled "An Act to prevent the unnecessary destruction of alewives in the town of Middleborough," be and hereby is repealed.

SECT. 10. *Provided, nevertheless*, That no clause in this act shall extend to or be considered so as to affect an act passed in the year of our Lord seventeen hundred and sixty-four, entitled "An Act in addition to an act entitled 'An Act to prevent the unnecessary destruction of alewives in the town of Middleborough.'"—[Jan. 30, 1792.

AN ACT for regulating the taking the Fish called Alewives, in their passage up Indian Head River, so called, between the Towns of Pembroke and Hanover, in the County of Plymouth, into a pond in said Town of Pembroke, known by the name of Indian Head Pond.

[Previous Act, 1790, p. 269. Additional Act, 1811, ch. 72; 1859, ch. 90.]

(Page 326.) SECT. 1. *Be it enacted*, That there shall be sluice-ways made and opened through, or passage-ways made round all and each of the dams

standing on or across the river aforesaid, sufficient in the judgment of the major part of the committee or committees of the aforesaid towns of Pembroke and Hanover, to be chosen as is hereafter provided, for the passage of the said fish up the said river to the aforesaid Indian Head Pond, in the town of Pembroke.

SECT. 2. *Be it enacted*, That the owner or owners of the several dams that now are, or hereafter may be erected on said Indian Head River, shall make and provide such sluice-ways or passage-ways as are by this act required to be opened and kept open from the tenth day of April to the twentieth day of May annually.

SECT. 3. *Be it further enacted*, That if any owner or owners of any dams that now are, or may hereafter be erected on or across said river, shall refuse or neglect to open and keep open such good and sufficient sluice-way or passage-way for the term aforesaid, he shall forfeit and pay the sum of fifty pounds, to be recovered by action of debt in any court proper to try the same, one moiety to him or them that shall sue and prosecute for the same, and the other moiety to the aforesaid towns of Pembroke and Hanover.

SECT. 4. *Be it further enacted*, That the towns of Pembroke and Hanover, at their respective town-meetings for the choice of town officers, in the month of March or April annually, shall choose at least three persons, freeholders in each of said towns, who shall be a committee to carry this act into effect, any four of whom shall be a quorum, and shall be sworn as other town officers are, to the faithful discharge of the duties of their office; and if any person chosen as aforesaid, and accepting of the said trust, shall neglect to take an oath as aforesaid within seven days from his being so chosen, he shall forfeit and pay the sum of ten shillings; or being chosen and sworn, if he shall neglect to perform his duty he shall forfeit and pay the sum of five pounds; the said forfeitures to be sued for and recovered by the treasurer of the town where such offender belongs, for the use of such town.

SECT. 5. *Be it further enacted*, That any three of said committee shall have full power and authority to open, or cause to be opened and kept open, such sluice or passage-ways at the expense of the owner or owners of any dam or dams that now are, or hereafter may be erected on or across said stream or river: *provided*, said owner or owners shall refuse or neglect to open the same by the tenth day of April annually. And said committee are hereby empowered to remove all and every obstruction to the passage of said fish up or down said river, that may be in or across the same; and if, for the purposes mentioned in this act, it shall be necessary for said committee, or either of them, to go on the land of any person or persons through which said river runs, it shall not be deemed a trespass; and if any person or persons shall hinder or molest said committee, or either of them, in the execution of his or their office, the person so offending shall forfeit and pay a sum not exceeding twenty shillings, nor less than ten shillings, to be sued for and recovered by and to the use of the officer against whom the offence is committed; and said committee shall not be liable to prosecution for any doings in the necessary discharge of the duties of their office.

SECT. 6. *Be it further enacted*, That the time when and the places where said fish shall be taken in said river, or any brook or stream discharging into said Indian Head River or Pond, shall be agreed upon by and be under the regulations of the committees of the said towns of Pembroke and Han-

over, or the major part of them: *provided*, the said committee shall not authorize the taking said fish more than three days in a week in any of the places before mentioned; and the said committee shall post up notifications in two of the most public places in each of the said towns of Pembroke and Hanover, specifying the times and places when and where said fish shall be taken, six days at least before the said tenth day of April annually.

SECT. 7. *Be it further enacted*, That if any person or persons shall presume to take any of said fish, on the river or streams aforesaid, in any other way or manner than such as shall be directed by the aforesaid committee, or the major part of them, he shall forfeit and pay a sum not exceeding three pounds nor less than forty shillings, at the discretion of the justice before whom the same shall be tried; one moiety to him who shall prosecute and sue for the same, and the other moiety to the use of said towns of Pembroke and Hanover.

SECT. 8. *Be it further enacted*, That no person shall be disqualified from being a witness on any trial that may be had pursuant to this act, on account of his being an inhabitant of or belonging to either of the said towns of Pembroke or Hanover. And if any person or persons shall be found having said fish in his or their possession, and there be reasonable grounds of suspicion that such person or persons took said fish unlawfully, he or they shall be subject to the penalties of this act, unless sufficient evidence be adduced that said fish were taken agreeably to the spirit and meaning of the same.—[Feb. 22, 1792.

AN ACT to enable the Town of Framingham to regulate and order the taking of the Fish called Shad and Alewives, within the limits of said Town.

(Page 352.) SECT. 1. *Be it enacted*, That from and after the publication of this act, it shall and may be lawful for the inhabitants of the said town of Framingham, at their annual meeting in March or April, during the continuance of this act, to determine and order in what manner and by whom the said fish called shad and alewives may be taken within the limits of said town. And the said inhabitants shall cause a copy of such order, attested by the town clerk, to be posted up in some public place in said town; whereunto all persons shall conform with respect to the taking said fish called shad and alewives, within said town of Framingham, on penalty that each and every offender against the same shall forfeit and pay the sum of twenty shillings, to be sued for and recovered before any court proper to try the same; one moiety to the informer, and the other moiety to the poor of said town of Framingham.

SECT. 2. *Be it further enacted*, That any of the inhabitants of the said town of Framingham, not concerned in violating this act, shall and may be admitted as witnesses to testify in any action that may be brought for the above penalty; they being inhabitants of said town notwithstanding.—[March 8, 1792.

AN ACT to prevent the Catching of Fish in the Mouth of Agawam River.

(Page 353.) SECT. 1. *Be it enacted*, That from and after the first day of April next, no person or persons be allowed to catch any salmon, shad or alewives, with seines, nets, pots or in any other way, in any part of said river within one mile of the mouth or entrance thereof into Connecti-

cut River. And if any person or persons shall presume to take or catch any fish in the said Agawam River, contrary to the true intent of this act, each person so offending shall, for each offence, forfeit and pay a fine of four pounds.

SECT. 2. *Be it further enacted*, That all nets or seines used in taking fish as aforesaid, shall be and hereby are forfeited to any person or persons who shall seize the same, to his or their own use.

SECT. 3. *Be it further enacted*, That all fines and forfeitures incurred by any breach of this act shall and may be sued for and recovered, by action of debt or information, before any justice of the peace within the county of Hampshire; one half of such fines shall enure to him or them who shall sue or prosecute for the same, and the other half to the poor of the town where the offence shall be committed.—[March 8, 1792.]

AN ACT in addition to an Act passed February the twenty-second, one thousand seven hundred and ninety, entitled "An Act to prevent the Destruction of the Fish called Alewives in Taunton Great River (so called), in the county of Bristol, and to regulate the Catching of said Fish therein for the future."

[Original Act repealed March 19, 1792.]

(Page 354.) Whereas the provision made in the said act for preventing the destruction of the said fish has been found insufficient for that purpose:

SECT. 1. *Be it enacted*, That from and after the publication of this act, it shall not be lawful for any person, with scoop-nets or any other instruments, nor at any other time or place than is allowed by said act, to molest, hinder or take said fish, on the penalties made and provided in said act.

SECT. 2. *Be it further enacted*, That it shall be the duty of the persons chosen by the towns on said river, to enforce said act; to remove or cause to be removed all hinderances and obstructions in said river; and to prevent all unlawful catching of said fish as aforesaid, in their towns respectively, on the penalties made and provided in and by said act.—[March 8, 1792.]

AN ACT regulating the taking of the Fish called Alewives, in the several Streams emptying into the Merrimack River, in the Town of Andover.

[Additional Act March 11, 1797, repealing that part of the fifth clause which determines the price.]

(Page 365.) SECT. 1. *Be it enacted*, That it shall and may be lawful for the inhabitants of said town of Andover, from time to time, at their annual meeting in the month of March or April, to determine and order, by whom, and in what place or places, the said fish may be taken in the several streams emptying into Merrimack River within the town aforesaid; and shall cause a copy of such order, attested by the town clerk of said town, to be posted up in some public place in said town, and in the town of Methuen; and any person who shall violate such order, upon conviction thereof, shall forfeit and pay a sum not exceeding twenty shillings, nor less than ten shillings: *provided*, the quantity so taken is less than one barrel; but for every barrel so taken, they shall forfeit and pay the sum of forty shillings, to be recovered before any justice of the peace in the county of Essex before whom the complaint shall be made, one moiety to the informer, the other moiety to the poor of said town.

SECT. 2. *Be it further enacted*, That the times and manner prescribed for taking fish in an act passed 4th March, 1790, entitled "An Act to regulate

the catching of salmon, shad and alewives, and to prevent obstructions in Merrimack River, and in the other rivers and streams running into the same within this Commonwealth, and for repealing several acts heretofore made for that purpose," shall be observed as the times and manner for taking said fish in the said streams in the town of Andover; and if any person shall take any of said fish at any other time or in any other manner than is prescribed in the act last recited, he shall for each offence be subject to such penalty as is provided in the said act for the same offence, to be recovered and appropriated in the same manner as is therein directed.

SECT. 3. *Be it further enacted*, That any of the inhabitants of said town of Andover, not concerned in violating this act, may be admitted as witnesses in any action that may be brought for the penalty aforesaid, they being inhabitants of said town notwithstanding.

SECT. 4. *Be it further enacted*, That the inhabitants of said towns at their annual meeting in the month of March or April, shall be and hereby are empowered to choose a committee or committees, being freeholders in said town; and each person so chosen shall be sworn faithfully to discharge the duties required of them by said town, agreeable to this act; and the committee or committees, or the major part of them, are hereby authorized and empowered to open such sluice or passage-way, through or round any dams erected, or that shall be erected across said streams, as they shall judge necessary for the free passage of said fish, and to remove lumber and every other obstruction to the free passage of said fish; to erect racks or wooden frames, as they shall judge necessary, in the stream or streams through which the said fish pass, they being restricted, in such opening and clearing, to do the same as little to the damage of the owner or owners as may be; such passage so opened by the committee aforesaid, shall continue open, if they shall judge it necessary, from the tenth day of April to the last day of May, annually. And if any person or persons shall unlawfully obstruct the passage or passages for said fish, remove or injure any rack or racks that shall be erected by said committee on said streams, such person or persons so offending, upon conviction thereof shall forfeit and pay a sum not exceeding thirty pounds nor less than ten pounds, to be recovered in any court proper to try the same, one moiety to the informer and the other moiety to the poor of said town.

SECT. 5. *Be it further enacted*, That the said committee or committees be and hereby are authorized and directed to distribute the fish that may be taken by them, or any person under them, as equally as circumstances will admit, to such persons as apply for the same; and for the fish so supplied, the committee or committees shall demand a sum not exceeding one-fifth of a dollar for each hundred of fish so delivered, excepting of certain poor persons of said town of Andover, who, in the opinion of the selectmen of said town, are unable to pay for the same, and such persons shall be supplied gratis with such quantities as the committee or committees shall judge expedient. And the said committee or committees so appointed, shall, on the first town-meeting after the month of May annually, exhibit an account of all the fish by them disposed of, and the balance, if any remains, after paying them a reasonable compensation for their services, shall be paid into the treasury of said town, for the benefit thereof.

SECT. 6. *Be it further enacted*, That it shall and may be lawful for any of said committee or their assistants, while in the execution of their office,

to go upon the land adjoining to said streams without being considered as trespassers; and any person or persons that shall attempt to molest or hinder said committee, or either of them, in the execution of their office, shall forfeit and pay a sum not exceeding four pounds, nor less than three pounds, to be recovered in any court proper to try the same, to be disposed of as is provided for in other breaches of this act.

SECT. 7. *Be it further enacted*, That if any person is found attempting to take any of said fish at any time or place otherwise than is provided in this act, or if any of said fish shall be found in the possession of any person, such person or persons shall be deemed to have taken them unlawfully, and shall be subject to the penalty of this act, unless he or they shall make it appear upon trial that they came lawfully by said fish.—[March 9, 1792.

AN ACT securing the free passage of Fish called Alewives, in the Rivers in the Town of Dartmouth, in the County of Bristol, and for the preservation of the same.

(Page 376.) SECT. 1. *Be it enacted*, That the owner or owners of each and every mill-dam on the River Pasequamanset (so called), and other rivers situate in the town aforesaid, shall make, provide and continue a sluice-way of three feet wide and eight inches deep, for the said fish to pass their respective dams, as far as the selectmen of the said town shall judge convenient and proper for the said fish to pass in; and the selectmen of the said town of Dartmouth are hereby authorized and empowered, on the second Monday of April annually, to open the said sluice-ways, which, when opened by them, shall remain open until the tenth day of May annually; and the owner or owners, proprietor or proprietors of any dam or dams on the said respective rivers, who shall neglect or refuse to make, provide and continue a sluice-way as aforesaid, or that, after such sluice-way is opened as aforesaid, shall shut or obstruct or cause the same to be shut or obstructed during the term the said sluice-way is to be kept open as aforesaid, shall forfeit and pay the sum of forty pounds for each offence.

SECT. 2. *Be it further enacted*, That the said town of Dartmouth, at their annual meeting for the choice of town officers in the month of March or April annually, are hereby authorized and empowered to choose a committee consisting of not more than twelve nor less than two suitable persons for inspectors of the said river, whose duty it shall be, within four days after their appointment, to put up in four public places nearest the said river, a notification or notifications under their hands or under the hands of the major part of them, pointing out the time when and designating the places where the said fish may be taken in the said river; and if any person or persons shall pull down, mar or deface such notification or notifications, he or she shall for each offence forfeit and pay ten shillings; and if such committee shall refuse or neglect to put up such notification or notifications, within the said term of four days, such committee shall forfeit and pay ten shillings. And any person who shall presume to take any of the said fish in the said rivers, except at the times and places pointed out and designated by the said committee as aforesaid, shall forfeit and pay three pounds for each offence.

SECT. 3. *Be it further enacted*, That if any person or persons shall make any wear or wears, or any other obstruction to hinder the passage of said fish up the said rivers, each person so offending shall forfeit and pay the

sum of five pounds; and any person who shall take or catch any of the said fish in the said rivers, with any other instrument than a dip-net, shall forfeit and pay four pounds for each offence.

SECT. 4. *Be it further enacted*, That if any person or persons shall set or draw any seine, drag-net or marsh-net in the said rivers, from and after the tenth day of April to the twentieth day of May annually, each person so offending shall forfeit and pay ten pounds.

SECT. 5. *Be it further enacted*, That if any person or persons shall set or draw any seine, drag-net or marsh-net in the said rivers or ponds belonging to the said town of Dartmouth, for the taking any fish (menhaden excepted) at any time whatsoever, he or they so offending shall forfeit and pay the sum of twenty pounds.

SECT. 6. *Be it further enacted*, That all the forfeitures incurred by this act shall accrue to the said town of Dartmouth, to be recovered by the treasurer of the said town, in an action of debt, in any court proper to try the same; and no person shall be considered as disqualified from giving evidence in any such action on account of his living in or being an inhabitant of the said town of Dartmouth.—[June 27, 1792.

1793.

AN ACT to enable the Town of Newbury to Regulate and Order the taking of Fish called Shad, Bass and Alewives, in the River Parker, within the limits of said Town.

(Page 408.) SECT. 1. *Be it enacted*, That from and after the publication of this act it shall and may be lawful for the inhabitants of said town of Newbury, at their annual meeting in March or April, during the continuance of this act, to determine and order in what manner and at what time the said fish called shad, bass and alewives, in the River Parker, may be taken within the limits of said town. And the said inhabitants shall cause a copy of such order, attested by the town clerk, to be posted up in some public place in said town, whereunto all persons shall conform with respect to the taking said fish called shad, bass and alewives, in the River Parker, within said town of Newbury, on penalty that each and every offender against the same shall forfeit and pay the sum of twenty shillings, to be sued for and recovered before any court proper to try the same; one moiety to the informer and the other moiety to the poor of said town of Newbury.—[March 2, 1793.

AN ACT to prevent the Destruction of the Fish called Alewives, in Taunton Great River, so called, in the County of Bristol, and also to regulate the Catching of the said Fish therein for the future.

[Act to regulate the price, Feb. 23, 1797. Additional Act, March 4, 1800, Original Act repealed, Feb. 22, 1790. Addition passed March 8, 1792]

(Page 422.) Whereas the law made for regulating the alewife fishery in Taunton Great River, so called, in the county of Bristol, is found to operate unequally upon and to the disadvantage of several towns situated on said river, and has not answered the salutary purpose of preserving and increasing the said fish as intended :

SECT. 1. *Be it enacted*, That from and after the twentieth day of March, instant, it shall not be lawful for any person or persons whatever, at any time after the twentieth day of March, instant, as aforesaid (except as is

hereinafter provided), to catch alewives or any other fish with seines or drag-nets in said river: *provided*, that it shall and may be lawful for the inhabitants of the several towns situated on the said river to catch alewives and other fish, within the bounds of their own town, and nowhere else, with seines or drag-nets, part of four days in each week only, viz.: on Monday, Tuesday, Wednesday and Thursday, from sunrising till sunsetting on each of said days in each week: *and provided*, each town situated on said river as aforesaid, draw or sweep with two seines or drag-nets only; except the town of Taunton, which town is hereby allowed and permitted to draw or sweep with three seines or drag-nets, in said river, on the days and within the time mentioned as aforesaid; and neither of the towns aforesaid, nor the inhabitants thereof, are permitted at any time whatever to set their seines or drag-nets across said river, or any part thereof, or make use of any seine or drag-net which is or shall at the time be more than twenty rods in length: *provided, also*, that each of said towns shall, at a legal town meeting, ascertain and establish annually, by vote, the places where the said seines or drag-nets may be drawn within the bounds of their respective towns, as aforesaid, exclusively; and at the same meeting, or at an adjournment thereof, dispose of and grant for that year, and so on from year to year, the sole privilege of catching alewives or other fish, with seines or drag-nets, on the parts of the days of the week above mentioned and specified, at the places ascertained and established as aforesaid, to such person or persons as shall offer or give most for the same, and give sufficient security for the payment of the same so offered and agreed on, at such time and in such manner as the inhabitants of the respective towns shall assign and order; said person or persons so agreeing and giving security as aforesaid to have right to fish, and no other person whatever.

SECT. 2. *Be it further enacted*, That if any person or persons shall presume to draw any seine or drag-net, on any day or time except the parts of days before mentioned, or at any place other than the one ascertained and established by the town, as aforesaid, or shall on any day or at any place set a seine or drag-net in or across said river, or any part thereof, he shall forfeit and pay fifteen pounds for each and every such offence, with costs of suit; one half thereof to the use of the poor of the town where the offence shall be committed, and the other half thereof to him or them who shall sue for the same, to be recovered by action of debt in any court proper to try the same.

SECT. 3. *Be it further enacted*, That if any person or persons shall be found sweeping with any seine or drag-net, or if any seine or drag-net shall be made use of by any person or persons whatever, contrary to the true intent and meaning of this act, or any part thereof, it shall and may be lawful for any person or persons to seize and take such seine or drag-net to his or their own use and benefit; and if prosecuted therefor, to plead the general issue and give this act in evidence, as though the same was especially pleaded.

SECT. 4. *Be it further enacted*, That the several towns on Taunton Great River aforesaid shall, at their annual meeting in the month of March or April in each year, choose three or more persons, being freeholders in their respective towns, to see that this act be duly observed; and each person so chosen shall be sworn to discharge faithfully the duties herein required; and if any person so chosen shall refuse to serve, he shall forfeit and pay, to

and for the use of the poor of the town to which he belongs, the sum of twenty shillings, to be sued for and recovered by the town clerk, and the said town shall immediately proceed to a new choice.

SECT. 5. *Be it further enacted*, That an act made and passed the twenty-second day of February, in the year of our Lord one thousand seven hundred and ninety, entitled "An Act to prevent the destruction of the fish called Alewives, in Taunton Great River, so called, in the county of Bristol, and to regulate the catching said fish therein for the future," be and it is hereby repealed (excepting the repealing clause thereof): *provided*, that all acts and things done and performed already, by virtue of said act, are hereby and shall be considered good and valid as though this present law had never been made; and all sales of privilege and ascertaining of places for catching alewives and other fish for the present year, shall be considered good and valid as though done under and by virtue of this present act.

SECT. 6. *Be it further enacted*, That the purchasers of the privileges aforesaid shall sell said fish to any person or persons who shall apply therefor, when they have any on hand, at the rate of two shillings per hundred, for the first three weeks after fish begin to run; and at the rate of one shilling and sixpence per hundred afterwards, and no more, upon the penalty of forfeiting twenty shillings for every hundred of said fish they shall sell over and above said prices; to be recovered by action of debt in any court proper to try the same: *provided*, this act shall not operate so as to establish any price at which said fish shall be sold by the purchasers of the privileges in said towns the present year.—[March 19, 1793.]

AN ACT permitting the Inhabitants of that part of the Town of Wareham which was formerly part of Rochester, to take Alewives with Seines or Drag-nets, at a place called the Narrows, in Wareham River, on a certain Day in each Week.

(Page 441.) SECT. 1. *Be it enacted*, That any inhabitant of that part of the town of Wareham which was formerly part of Rochester, be and they are hereby allowed and permitted to take for their own use, with one seine or drag-net only, the fish called alewives, at a place called the Narrows, in Wareham River, on the west side thereof, and to the northward of Nathan Bassett's now dwelling-house, one-half day in each week, from sunrising until twelve of the clock on every Monday, and at no other time; any law or usage to the contrary notwithstanding.

SECT. 2. *Be it further enacted*, That no person or persons, inhabitants as aforesaid, shall sell or dispose of any of said fish, caught as aforesaid, to any person or persons not inhabitants as aforesaid.

SECT. 3. *Be it further enacted*, That if upon complaint made before any justice of the peace for the county of Plymouth, any person or persons shall be convicted of a breach of this act, he shall forfeit and pay, for every such offence, a fine of four pounds; one half thereof to the complainant, and the other half thereof to the poor of the town of Wareham.—[March 26, 1793.]

AN ACT in addition to an Act passed the fourth day of March, one thousand seven hundred and ninety, entitled "An Act to regulate the catching of Salmon, Shad and Alewives, and to prevent obstructions in Merrimack River, and in the other Streams running into the same, within this Commonwealth."

[Refers to an Act passed March 4, 1790. Additional Acts, 1794, p. 511; 1803, p. 43; 1795, p. 35; 1804, p. 441; 1805, p. 577; 1807, p. 56.]

(Page 442.) Whereas it is found by experience that the catching of fish at or near the mouth of the rivers and streams emptying in Merrimack

River, within the town of Andover, greatly obstruct and impede fish entering and passing up said rivers and streams: therefore,

SECT. 1. *Be it enacted*, That no person or persons shall, after passing this act, be allowed to catch salmon, shad or alewives, or drag any seine, or set any net, pot or other machine, for the purpose of taking or catching said fish, or any other ways obstruct said fish in their passage, within fifty rods below or twenty rods above the mouth of any river or stream in the town of Andover emptying into Merrimack River aforesaid; nor draw any seine, for catching of alewives, between the mouths of Shawshine River and Cocheco Brook, on penalty of four pounds; and the seine, net, pot or other machine so used to be forfeited; and the fine aforesaid to be recovered and applied in the same manner as the fines are for the breach of the act to which this is in addition.—[March 27, 1793.

AN ACT in addition to and for repealing a certain Clause in an Act passed March the twenty-eighth, in the year of our Lord one thousand seven hundred and eighty-eight, entitled "An Act to prevent the Destruction of Alewives, and other Fish, in Ipswich River, and to Encourage the Increase of the same."

[1788, p. 191. Additional Acts, 1797, p. 128; 1804, p. 431; 1805, p. 524; 1806, p. 1; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22.]

(Page 451.) Whereas it appears by the petition of Thomas Burnham, and a certificate of the selectmen of the towns of Ipswich, Topsfield and Middleton accompanying the same, that a repeal of a certain clause in the aforementioned act, so far as it respects the using and improving the said Burnham's saw-mill, from the last day of April to the first day of June, annually, provided the same be subjected to the regulation hereinafter mentioned, will not be injurious to the public:

SECT. 1. *Be it enacted*, That the future using and improving the said Burnham's lower saw-mill, standing on Ipswich River, within the town of Ipswich, from the last day of April to the first day of June annually, shall be under the directions, regulations and restrictions of the major part of the selectmen of the towns of Ipswich, Topsfield and Middleton, for the time being; such directions, regulations and restrictions being made in writing, under the hands of the major part of the selectmen aforesaid, delivered to the said Burnham, from time to time, as shall be found necessary.

SECT. 2. *Be it further enacted*, That for every omission or violation of such directions, regulations or restrictions as aforesaid, the said Burnham shall be subjected to such penalties and forfeitures as is incurred by the aforementioned act, for using and improving said saw-mill, within the term aforesaid, to be sued for, recovered and applied in manner as is prescribed in the said act.

SECT. 3. *Be it further enacted*, That the sixth clause of the aforementioned act, so far as it respects the using and improving the said Burnham's lower saw-mill, within the term therein mentioned, shall be and hereby is repealed.—[March 28, 1793.

AN ACT for regulating the Opening of Sluice-Ways in the several Mill-Dams on River Meadow Brook, in the Town of Chelmsford and District of Carlisle.

(Page 452.) SECT. 1. *Be it enacted*, That the owners of mills on River Meadow Brook, so called, in the town of Chelmsford and district of Carlisle,

be and they are hereby permitted to keep the sluice-ways in their respective mill-dams shut such part of the time heretofore provided by law for keeping them open for the passage of fish up the said brook, as shall, by the selectmen of the town of Chelmsford and the selectmen of the district of Carlisle, for the time being, be judged will not prevent the passage of the fish up the said stream, and most conducive to the public good: *provided*, the said selectmen of Chelmsford and Carlisle make their determination in writing, under their hands, and such determination be kept constantly posted up in some conspicuous place at each of the mills on the said brook; any law to the contrary notwithstanding.—[March 28, 1793.]

1794.

AN ACT in addition to an Act, entitled "An Act to regulate the Catching of Salmon, Shad and Alewives, and to prevent Obstructions in Merrimack River, and in the other Rivers and Streams running into the same, within this Commonwealth, and for repealing several Acts heretofore made for that purpose."

[Refers to March 4, 1790. Additional Acts, 1803, p. 43; 1795, p. 35; 1804, p. 441; 1805, p. 577; 1807, p. 56.]

(Page 511.) SECT. 1. *Be it enacted*, That all pecuniary fines or forfeitures for the breach of an act passed in the year of our Lord one thousand seven hundred and ninety, entitled "An Act to regulate the catching salmon, shad and alewives, and to prevent obstructions in Merrimack River, and in the other rivers and streams running into the same within this Commonwealth; and for repealing several acts heretofore made for that purpose," which by the said act are set at more than four pounds, may be recovered by indictment, either in the supreme judicial court or court of general sessions of the peace in the county where the offence shall be committed.

SECT. 2. *Be it further enacted*, That where any person or persons shall be convicted in either of the said courts, of erecting or continuing any obstructions or incumbrance in or across any of the rivers or streams mentioned in the said act, so as to prevent the free passage of the said fish up and down the said rivers and streams, the court before whom such conviction shall be, besides rendering judgment for such fine and cost, shall order such obstruction or incumbrance to be removed, and the materials thereof to be sold at vendue, to pay the expense of such removal, with the officer's fees, and if the same shall not be sufficient, may order the deficiency to be raised and levied on the goods and chattels of the person or persons convicted of erecting or continuing the same; and the warrant for removal shall be directed to the sheriff, deputy sheriff or coroner of the same county, as the case may require.

SECT. 3. *Be it further enacted*, That the fines and forfeitures which shall be recovered by indictment, pursuant to this act, shall be wholly to the use of the county in which the recovery shall be, towards discharging the expenses of such county; anything in the said act whereto this addition is made to the contrary notwithstanding.—[Feb. 26, 1794.]

AN ACT for continuing an Act made in the year of our Lord one thousand seven hundred and eighty-nine, entitled "An Act to prevent the Destruction of the Fish called Shad and Alewives, in Mistic River, so called, within the Towns of Cambridge, Charlestown and Medford, and for repealing all laws heretofore made for that purpose," and also for extending the said Act to the Towns of Woburn and Malden.

[1804, p. 399; 1808, p. 431; 1815, ch. 43.]

(Page 512.) SECT. 1. *Be it enacted*, That the said act, in every article and clause, matter and thing, shall continue and be in force after the first day of March next; anything in the said act to the contrary notwithstanding.

SECT. 2. *Be it further enacted*, That the said act shall extend to the towns of Woburn and Malden, in the same manner as it would have extended in case the said towns had been expressly named in the said act.—[Feb. 27, 1794.

AN ACT to prevent the Taking of Fish near the Dam at the Canal at South Hadley Falls, in Connecticut River.

[Additional Act, 1817, ch. 157.]

(Page 518.) SECT. 1. *Be it enacted*, That no person or persons, at any time hereafter, shall take any salmon or shad within one hundred rods of any part of the dam in Connecticut River, near the canal at South Hadley, with any net, seine, pot, scoop-net or any other instrument or machine whatever; and if any person or persons shall take or catch any salmon or shad, contrary to the true intent and meaning of this act, each person so offending shall, for every such offence, forfeit and pay a fine of four pounds.

SECT. 2. *Be it further enacted*, That all nets, seines or other instruments or machines used in taking salmon or shad as aforesaid, shall be and hereby are forfeited to any person or persons who shall prosecute for the same, with costs of suit, to his or their own use, upon complaint or information to any justice of the peace in and for the said county of Hampshire, who may thereupon issue his warrant to seize the same, to be kept until trial of the said complaint or information, which the said justices are hereby fully authorized to hear and determine.

SECT. 3. *Be it further enacted*, That all sums of money forfeited by any breach of this act, shall and may be sued for and recovered by action or information, with costs of suit, before any justice of the peace within the county of Hampshire; and one half of such fine shall enure to him or them who shall sue or prosecute for the same; the other half thereof for the use of the county of Hampshire; and any person or persons aggrieved at the sentence of any justice of the peace, given in pursuance of this act, may appeal therefrom to the next court of general sessions of the peace to be holden in said county.

SECT. 4. *Provided, always*, That nothing in this act shall be construed to justify the erecting or continuance of the said dam; but the propriety of erecting and continuing the same, whenever this may be called in question, shall be determined on the same principles as though this act had never been made.—[Feb. 27, 1794.

1795.

AN ACT to prohibit, during the months of December, January and February, the taking of Salmon in Merrimack River, and in the waters running into the same.

[Addition to Act March 4, 1790. Additional Acts, 1803, p. 43; 1804, p. 441; 1805, p. 577; 1807, p. 56; 1846, ch. 192.]

(Page 35.) SECT. 1. *Be it enacted*, That from and after the passing of this act, no person shall be allowed to catch any salmon in Merrimack River, or in the waters running into the same, during the months of December, January and February, and any person who shall offend herein, or who shall be found during those months with any salmon which shall have been caught contrary to the intent of this act, shall forfeit and pay a sum not exceeding twenty dollars nor less than three dollars, to be recovered by action of debt to the use of any person who will sue for the same, or by indictment, to the use of the county in which the offence shall be committed.—[June 20, 1795.]

1796.

AN ACT to enable the Town of Natick to regulate and order the taking of the Fish called Shad and Alewives, within the limits of said Town.

(Page 53.) SECT. 1. *Be it enacted*, That from and after the publication of this act, it shall and may be lawful for the inhabitants of said town of Natick, at their annual meeting in March or April, during the continuance of this act, to determine and order in what manner and by whom the said fish called shad and alewives may be taken within the limits of said town; and the said inhabitants shall cause a copy of such order, attested by the town clerk, to be posted up in some public place in said town, whereunto all persons shall conform with respect to the taking said fish called shad and alewives within said town of Natick, on penalty that each and every offender against the same shall forfeit and pay the sum of three dollars and thirty-three cents, to be sued for and recovered before any court proper to try the same; one moiety to the informer, and the other moiety to the poor of said town of Natick.—[February 5, 1796.]

1797.

AN ACT for regulating the Alewife Fishery in the Town of Bridgewater, in the County of Plymouth, and for repealing all Laws heretofore made for that purpose.

[March 7, 1801; February 27, 1802.]

(Page 105.) SECT. 1. *Be it enacted*, That all laws heretofore made for regulating the alewife fishery in said Bridgewater, be and they hereby are repealed; and it shall and may be lawful for the said town of Bridgewater, at any legal meeting of the inhabitants of the said town, to choose a committee to sell or otherwise dispose of the privilege of taking said fish, as the town shall direct, at the several wears in said town, or either of them, for the most it will fetch, on the days following, viz.: at the wear by the town mills, so called, on Monday and Tuesday of each week; at the Great River mills, so called, on Wednesdays and Thursdays in each week; and at the wear by Whitman's mills, so called, on Mondays, Tuesdays and Wednesdays in each week; and the emoluments arising from said privilege shall be appropriated by said town to such purposes

and uses as the inhabitants thereof shall, in legal town meeting, from time to time determine.

SECT. 2. *Be it further enacted*, That if the purchaser or purchasers, manager or managers, or those employed by them, shall presume to take any of the said fish at any other time or place in said town than is in this act provided, and if any other person or persons whatever, except the purchaser or purchasers, manager or managers of said privilege, or those employed by them, shall presume to take or catch any of said fish, in any of the rivers or streams within the boundaries of said town, he or they so offending shall for each offence forfeit and pay a sum not exceeding thirteen dollars nor less than one dollar, at the discretion of the justice before whom the same shall be tried.

SECT. 3. *Be it further enacted*, That if the said purchaser or purchasers, manager or managers of said privilege, shall, when in his or their power, neglect or refuse to supply any person or persons with said fish, who may apply therefor, at the rate of twenty-five cents for a hundred of said fish, he or they so offending shall, for each offence, forfeit and pay the sum of five dollars; and if any person or persons shall ask, demand and receive more than twenty-five cents for a hundred of said fish, and so in that proportion for a greater or less number, he or they so offending shall, for each offence, forfeit and pay the sum of five dollars.

SECT. 4. *Be it further enacted*, That the said town of Bridgewater shall, at their annual meeting in March or April, choose a committee not exceeding nine nor less than three freeholders of said town, who shall be sworn to the faithful discharge of the duties enjoined upon them by this act; and it shall be the duty of said committee to cause the natural course of the rivers, passage-ways or streams through which the said fish pass, to be kept open and without obstruction during the whole time the said fish pass up in said rivers, passage-ways and streams in each year, and to remove any such as shall be found therein, and to make the said passage-ways wider or deeper, if they or the major part of them shall judge it necessary; and the said committee, or any two of them, paying a reasonable compensation therefor, if demanded, shall have authority (in discharging the duties enjoined upon them by this act) to go on the lands or meadows of any person through which such rivers, passage-ways or streams run, or into any mill, forge or other water-works on said rivers or streams, without being considered as trespassers; and any person who shall molest or hinder the said committee, or either of them, in the execution of the business of his or their office, or shall obstruct any passage-way in the said rivers and streams, otherways than may be allowed by the said committee, or a major part of them, he or they so offending shall forfeit and pay, for every such offence, a sum not exceeding ten dollars nor less than one dollar, at the discretion of the justice before whom the same shall be tried: *provided, nevertheless*, that nothing in this act shall be considered as authorizing said committee to injure the proprietor of any mill or water-works, further than is necessary in order to give the fish a good and sufficient passage up said rivers.

SECT. 5. *Be it further enacted*, That it shall be the duty of the said committee to prosecute all breaches of this act, and for any two of them to seize and detain in their custody any net which may be found in the hands of any person using the same contrary to the true intent and meaning of

this act, until the person so offending makes satisfaction for his offence, or is legally acquitted therefrom. And that each and every person who shall be chosen on the committee, pursuant to this act, shall, within six days after his being notified by a constable of such choice, take the following oath before some justice of the peace for the county of Plymouth, or the clerk of said town of Bridgewater, who is hereby authorized to administer the same, viz. :—

You, A. B., being chosen one of the committee to inspect the alewife fishery in the town of Bridgewater, for the year ensuing, do solemnly swear that you will faithfully discharge the duties of said office, and duly prosecute all breaches of the law respecting said fishery that shall come to your knowledge. So help you GOD.

And that if any person chosen one of the said committee, and notified as aforesaid, shall neglect to take the foregoing oath for the space of six days after his being so notified, he shall forfeit and pay the sum of five dollars, to be recovered by action of debt in any court proper to try the same; one moiety thereof to be applied to the use of the said town of Bridgewater, the other moiety to the person or persons who shall sue for the same.

SECT. 6. *Be it further enacted*, That all the penalties incurred by any breach of this act, shall be recovered by complaint, before any justice of the peace within and for the county of Plymouth aforesaid, allowing an appeal to the court of general sessions of the peace for said county; and all sums of money recovered to the town as forfeited by this act, shall be for the support of the poor of the town of Bridgewater aforesaid. And no person, by reason of his being one of the said committee or an inhabitant of the said town, shall thereby be disqualified from being a witness in any prosecutions for a breach of this act.—[Feb. 10, 1797.

AN ACT to prevent the Destruction of the Fish called Bass, in the River Parker, in Newbury; and in Rowley River; and in the Streams and Waters running into the same, in the County of Essex.

(Page 117.) SECT. 1. *Be it enacted*, That on and after the first day of December next, if any person or persons shall catch, in any manner whatever, any of the fish called bass, in any part of the River Parker, in Newbury, or in Rowley River, or in any of the streams or waters running into the same, or shall offer them for sale, between the first day of December and the first day of March annually, he or they so offending shall forfeit and pay one dollar for each of the bass so caught or offered for sale as aforesaid.

SECT. 2. *Be it further enacted*, That all fines and penalties which may be incurred by a breach of this act, shall be recovered before any justice of the peace of the county of Essex, with cost of suit, for the use and benefit of the prosecutor. And it shall be the duty of the fish-wardens of said towns of Newbury and Rowley to see that this act is carried into effect; and any other person may complain and prosecute for breaches of this act.

SECT. 3. *Be it further enacted*, That the inhabitants of the town of Rowley aforesaid, shall, at their annual meetings, legally assembled, choose one or more fish-wardens, whose duty it shall be to see that this act is carried into effect, as aforesaid, and who shall be sworn to the faithful discharge of that trust, in the same manner as other town officers are sworn.—[Feb. 22, 1797.

AN ACT to regulate the Price of Fish called Alewives, in the Town of Taunton.

[Addition to March 19, 1793, repeals the price fixed by said Act.]

(Page 117.) SECT. 1. *Be it enacted*, That from and after the passing of this act, the selectmen of the town of Taunton, for the time being, together with any two justices of the peace in and for the county of Bristol, *quorum unus*, be and they are hereby authorized and empowered, from time to time, as they shall judge proper, to regulate the price of the fish called alewives, taken in Taunton Great River, so called, which price, when so regulated, shall be recorded on the book of records of said town by the clerk thereof.

SECT. 2. *Be it further enacted*, That if any person, after the passing of this act, shall presume to sell such fish at a greater price than may be established, for the time being, as aforesaid, he shall forfeit and pay, to the use of said town, for each hundred of such fish so sold, a fine of five dollars; and so in proportion, for a greater or less number, to be sued for and recovered before any justice of the peace in and for said county, or any other court proper to try the same, by the town treasurer of said town. And no person shall be disqualified from being a witness in any such suit, by reason of his or her being an inhabitant of said town.

SECT. 3. *Be it further enacted*, That so much of an act passed on the nineteenth day of March, in the year of our Lord one thousand seven hundred and ninety-three, as regulates the price of said fish taken in said river, be and the same is hereby repealed.—[Feb. 23, 1797.]

AN ACT in addition to and for repealing a certain Clause in an Act passed March the twenty-eighth, in the year of our Lord one thousand seven hundred and eighty-eight, entitled "An Act to prevent the Destruction of Alewives and other Fish in Ipswich River, and to encourage the increase of the same."

[Refers to March 28, 1738. 1733, p. 191; 1738, p. 451; 1804, p. 431; 1805, p. 524; 1806, p. 1; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22.]

(Page 128.) SECT. 1. *Be it enacted*, That the future using and improving of Andrews' saw-mill, standing on Ipswich River, at Farley's mill-dam, so called, within the town of Ipswich, from the last day of April to the first day of June annually, shall be under the directions, regulations and restrictions of the major part of the selectmen of the towns of Ipswich, Topsfield, Middleton and Reading, for the time being; such directions, regulations and restrictions being made in writing, under the hands of the major part of the selectmen aforesaid, and delivered to the said Andrews from time to time, as shall be found necessary.

SECT. 2. *Be it further enacted*, That for every omission or violation of such direction, regulations or restrictions as aforesaid, the said Andrews shall be subject to such penalties and forfeitures as are incurred by the aforementioned act, for using and improving said mill within the term aforesaid; to be sued for, recovered and applied in manner as is prescribed in the said act.

SECT. 3. *Be it further enacted*, That the sixth clause of the aforementioned act, so far as it respects the using and improving the said Andrews' saw-mill within the term therein mentioned, shall be and hereby is repealed.—[March 7, 1797.]

AN ACT for regulating the taking of Shad, Alewives and other Fish in Neponset River, and the several Streams from the Pond called Puncapog and Massapog.

[Additional Act, Feb. 19, 1799.]

(Page 148.) SECT. 1. *Be it enacted*, That there shall be sluice-ways through Leeds' dam and McLane's dam, on Neponset River, each eight feet in width, and in depth within eighteen inches of the mud-sill; the former within fifteen feet of Leeds' grist-mill floom, and the latter where the sluice-way now is. And the owners of all other dams across said River Neponset shall make sluice-ways of the width of eight feet, and in depth within eighteen inches of the mud-sill; and all dams on the brook from Massapog Pond to Neponset River shall have a sluice-way six feet wide and as low as the natural stream; and all dams on the brook from Puncapog Pond to said Neponset River shall have a sluice-way three feet wide and as low as the natural stream.

SECT. 2. *Be it further enacted*, That the court of general sessions of the peace for the county of Norfolk shall, at their spring sessions, annually appoint a committee of three disinterested freeholders, and not inhabitants of Stoughton, Sharon, Canton, Dorchester or Milton, who shall be sworn to the faithful discharge of their duty, and who shall determine the time when the sluice-ways shall be opened and also when they may be shut; and may also, if they think it expedient and not injurious to the passing of said fish, direct one-half of any sluice-way or sluice-ways to be shut; and may open any such sluice-way on said rivers and streams, at the expense of the owner, provided the owner neglects to do it for the space of twenty-four hours after being notified by said committee; and if upon trial the present depth of said sluice-ways shall prove insufficient, may, after hearing the parties, order the same to be made deeper: *provided*, the depth of said sluices shall never be lower than twelve inches above the mud-sill. And the said committee, or any two of them, may in the execution of their office, when necessary, enter on the land or lands adjoining said streams, without being considered as trespassers; and the reasonable expense of said committee shall be paid, one half by the owners of the dams on the rivers and streams aforesaid, and the other half by the towns of Sharon, Stoughton and Canton.

SECT. 3. *Be it further enacted*, That if any owner or owners, occupant or occupants of any dam, shall unreasonably refuse to open his or their sluice-way, when required by the committee, for the space of twenty-four hours, or shall refuse for the space of six days after being required by said committee to make their sluice-way deeper, as provided for by this act, he or they so offending shall for each offence forfeit and pay one hundred dollars.

SECT. 4. *Be it further enacted*, That in case any owner or owners, occupant or occupants of any dam shall shut the same, or cause or suffer any obstruction during the time assigned by such committee for the passing of the fish, or if any person shall, during said term, cause any obstructions in any part of said streams, or use any seine or drag-net in taking said fish, or shall take any of said fish except on Mondays, Wednesdays and Fridays in each week, and betwixt sunrising and sunsetting on each of said days, or shall so divert the water as to prevent the return of young fish, he or they so offending shall for each offence forfeit and pay the sum of twenty dollars, and shall forfeit all seines and nets so used.

SECT. 5. *Be it further enacted*, That the several towns adjoining the aforesaid river and streams may, at their annual meeting in March or April, choose three freeholders each, to inspect said fishery, who shall be sworn to the faithful discharge of their duty, and shall complain of all breaches of this act that come to their knowledge, and shall, when directed by the committee of sessions, remove obstructions in said river or streams at the expense of the person causing the same; and any person chosen one of said committee, and being notified thereof, and who shall neglect to take his oath for the space of seven days, shall forfeit and pay the sum of five dollars.

SECT. 6. *Be it further enacted*, That if any person shall hinder or molest either of said committee in the execution of their office, he or they so offending shall forfeit and pay a sum not more than seven nor less than three dollars.

SECT. 7. *Be it further enacted*, That each of the towns adjoining said river and streams, may, at the aforesaid annual meeting, choose a special committee to farm out or sell the privilege of taking said fish, and establish the rates at which fish so taken shall be sold, and the money arising from the sale of said fishery, or proceeds thereof, shall be paid into the respective town treasuries for the use of the respective towns, saving to Stoughton an equal share with the town of Canton, as is provided in the act of incorporation of the said town of Canton; and if any person, in any town aforesaid, after the farming or selling the privilege in said town, shall take any of said fish, not being legally authorized so to do, or if any person being authorized to take said fish, shall, when in his power, refuse to sell, or shall receive for said fish more than the established rate, he or they so offending shall forfeit and pay a sum not more than twelve nor less than two dollars.

SECT. 8. *Be it further enacted*, That it may be lawful for Jonathan Leonard and Adam Kinsley to keep down their dam the whole of the year, they to make such a canal or passage-way round their dam in Canton as the committee of the sessions aforesaid may approve of as being sufficient for the passage of said fish; and also make a wear to prevent said fish from passing up to the slitting mill.

SECT. 9. *Be it further enacted*, That all forfeitures incurred by a breach of this act shall be recoverable by action of debt, with costs of suit, before any justice of the peace for said county of Norfolk, excepting the penalty of one hundred dollars, which may be in like manner recovered in the court of common pleas for said county; one half of each penalty shall be to the use of the prosecutor and the other to the town where the offence is committed.

SECT. 10. *Be it further enacted*, That all laws heretofore made for the preservation of or taking the said fish in the said river and streams, be and they hereby are repealed.—[March 10, 1797.

AN ACT to repeal an Act passed the twentieth day of June, one thousand seven hundred and eighty-eight, entitled "An Act to prevent the Destruction of Salmon and Shad in Connecticut River.

(Page 154.) Whereas the beneficial effects contemplated by the act aforesaid have not been produced thereby, and the further continuance thereof is unnecessary: therefore,

SECT. 1. *Be it enacted*, That the act aforesaid, and every part thereof, from and after the passing of this act shall be and the same is hereby repealed.—[March 11, 1797.

AN ACT in addition to an Act passed March ninth, seventeen hundred and ninety-two, entitled "An Act regulating the taking of the Fish called Alewives in the several Streams emptying into Merrimack River, in the Town of Andover."

(Page 155.) SECT. 1. *Be it enacted*, That such part of the fifth enacting clause in the afore-recited act as limits and determines the price of the aforesaid fish to one-fifth of a dollar for each hundred taken and distributed, be and hereby is repealed.

SECT. 2. *Be it further enacted*, That the inhabitants of said Andover, at their annual meeting in the month of March or April, be and are hereby authorized and empowered to determine and state the price of the aforesaid fish per hundred; and the committee or committees, as in said act are directed, to supply the persons applying for said fish at such rates as the town may determine and direct, under the penalties provided in the act to which this is in addition: *provided*, such stated price be posted up in manner as directed in the afore-recited act respecting the places of taking said fish.—[March 11, 1797.

AN ACT to prevent the Destruction of the Eel Fishery in the Town of Orleans, in the County of Barnstable, and to preserve and regulate the same in the several Coves and Salt Ponds within the said Town.

(Page 162.) SECT. 1. *Be it enacted*, That from and after the first day of September next, it shall not be lawful for any person to take from any of the coves and salt ponds in the town of Orleans, more than three dozen of eels on any one day, without a permit in writing from the major part of the selectmen of said town, expressing the quantity permitted to be taken; and every person who shall take any of said eels from any of said coves and salt ponds exceeding the number of three dozen in any one day without such permit, shall forfeit and pay for each and every additional dozen so taken the sum of twenty-five cents.

SECT. 2. *Be it further enacted*, That if any boat or craft shall be found within the limits of any of the coves or salt ponds with any more eels on board than this act allows to be taken for each person on board on any one day, or than they are authorized to take by a permit from the selectmen aforesaid, it shall be the duty of such person or persons as shall be chosen by the said town of Orleans to see to the execution of this law, to seize on such boat or craft and detain the same not exceeding forty-eight hours, in order that the same be attached or arrested by due process of law, and made answerable for said fines and forfeitures, with cost of suit: *provided*, however, that as soon as the owner or master of such boat or craft shall pay such fines and forfeitures to the treasurer of said town, if he shall pay the same before being sued, such boat or craft shall be discharged, with the effects therein.

SECT. 3. *Be it further enacted*, That the said town of Orleans are hereby authorized to choose annually such number of fish-wardens as they may judge necessary, who shall be sworn to the faithful discharge of their duty, whose duty it shall be to prosecute for all offences against this act; and all

finer and forfeitures that shall be incurred by virtue thereof shall be one half to the use of him or them who shall sue for the same, and the other half to the use of the said town of Orleans; and the same shall be recovered with legal costs of suit by an action of debt, in any court proper to try the same.—[June 17, 1797.

AN ACT to prevent the Catching Fish with Seines in Fresh Pond (so called) in the Towns of Cambridge and Watertown.

(Page 165.) SECT. 1. That from and after the passing of this act it shall not be lawful to catch any fish with seines in Fresh Pond (so called), situate in the towns of Cambridge and Watertown; and any person who shall be found so catching fish, or who shall use a seine in the same pond in any manner whatsoever, shall for each offence forfeit a sum not exceeding fifty nor less than five dollars, to be recovered by an action of the case to the use of the person who shall sue for the same.—[June 17, 1797.

1798.

AN ACT to empower the Inhabitants of the Town of Middleborough, in the County of Plymouth, to regulate the Price of the Fish called Alewives, taken in said Town, and for Repealing all Laws heretofore made, so far as they respect the regulation of the Price of said Fish taken in said Town.

[Repealed 1815, ch. 111. Refers to Jan. 28, 1792. Additional Act, June 19, 1801.]

(Page 192.) SECT. 1. *Be it enacted*, That from and after the passing of this act, the inhabitants of the town of Middleborough aforesaid are hereby empowered annually, at any town meeting legally warned for that purpose, to establish the price of said fish taken in said town, provided said price be not above the rate of twenty-five cents per hundred.

SECT. 2. *Be it further enacted*, That all the laws heretofore made, so far as they respect the regulation of the price of said fish taken in said town, be and are hereby repealed.—[Feb. 8, 1798.

AN ACT to prevent the Destruction of Fish in Concord River, in the County of Middlesex.

[Additional Act, 1835, ch. 89.]

(Page 213.) SECT. 1. *Be it enacted*, That if any person or persons, after the first day of April next, shall take or catch any fish in Concord River, in the county of Middlesex, or in any pond or stream which empties into the same, after sunset and before sunrise, with the use of either torch or spear, every person so offending shall forfeit and pay for each offence a sum not exceeding five dollars, nor less than two dollars, to be recovered in an action of debt, one half to him who shall sue for the same and the other half to the town in which the fish shall be so caught or taken.

SECT. 2. *Be it further enacted*, That if any person or persons shall erect any wear across any of said waters, and thereby take any of said fish, or obstruct them in their passage through the same, every person so offending shall forfeit a sum not less than three dollars nor more than ten for each offence, to be recovered in manner and to the use aforesaid.—[March 1, 1798.

AN ACT for the Preservation of the Fish called Alewives, in Weweantit River, in the County of Plymouth, and for Regulating the Taking said Fish, and for Repealing all Laws heretofore made for that purpose.

[Additional Act, 1819, ch. 118.]

(Page 214.) SECT. 1. *Be it enacted*, That the several towns of Rochester, Wareham and Carver shall, at their town meeting in the fall of the year annually, respectively choose a committee of three persons in each town, whose duty it shall be, in the month of March annually, to sell at public vendue the privilege of taking said fish at such places, not exceeding three in said towns, and on such days, not exceeding three in each week, as said committee shall agree upon and publish in their conditions of sale, in which conditions said committee shall also express the price at which it may be lawful for said purchasers to sell said fish when taken, not exceeding the rate of twenty-five cents for one hundred of said fish; and said committee, before they enter upon the execution of their office, shall be sworn to the faithful and impartial performance of their duty in the same manner as other town officers.

SECT. 2. *Be it further enacted*, That the committee of the town of Rochester the first year, the committee of the town of Wareham the second year, and the committee of the town of Carver the third year, and so on in rotation forever, shall notify the town clerks of the other towns concerned in said fishery of the time and place in which said committee shall meet; said notice to be served ten days at least before the time of meeting, at which meeting as well as all subsequent meetings, the majority present shall have the power and authority of the whole committee.

SECT. 3. *Be it further enacted*, That all persons, except the purchaser or purchasers, or those employed by them, who shall take any of said fish in Weweantit River, or in any pond or stream having communication therewith, Sippican River excepted, shall forfeit and pay the sum of twenty dollars.

SECT. 4. *Be it further enacted*, That if either of the towns of Rochester, Wareham or Carver shall neglect to choose their proportion of said committee, as they are required by this act, or if the committee, when chosen, whose duty it shall be to notify the clerks of the other towns of the proposed time for the whole committee to meet, as aforesaid, shall neglect to give such notice, the town or committee offending as aforesaid shall, for each offence, forfeit and pay to the use of the town or towns performing the duties required by this act, the sum of one hundred dollars.

SECT. 5. *Be it further enacted*, That the owner or occupier of any dam on said river shall, annually, betwixt the first day of April and twenty-fifth day of May following, for such term and in such manner as said committee shall direct, open a sufficient sluice-way for the passage of said fish; and the owner or occupier of such dam, neglecting to open or to continue open a sluice-way as aforesaid, shall forfeit and pay the sum of fifty dollars. And the committee aforesaid shall have power to open such dam when neglected as aforesaid, at the expense of the owner or occupier.

SECT. 6. *Be it further enacted*, That if any person shall make any wear or other obstruction to the free passage of said fish, or shall make use of any seine in said river or in any pond or stream communicating therewith, the person offending shall forfeit and pay the sum of fifty dollars; and said

committee shall have authority to remove such wear or obstruction at the expense of the person causing the same; and also to seize any scine used as aforesaid, and to dispose of the same to the use of the said towns.

SECT. 7. *Be it further enacted*, That the treasurers of the aforesaid towns respectively, are hereby empowered, upon the complaint of any of the committee aforesaid, to sue for the recovery of any forfeitures incurred by the breach of any of the regulations provided in this act; and also of such further regulations as may, from time to time, be provided by the committee aforesaid. And all fines and forfeitures recovered for any breaches aforesaid, except such as are mentioned in the fourth section of this act, shall, together with the proceeds of said fishery, be equally divided between the aforesaid towns; and the treasurers aforesaid respectively may, in behalf of their respective towns, recover in an action on the case, of any person or persons, corporation or corporations holding the same, one-third part thereof in any court proper to try the same.

SECT. 8. *Be it further enacted*, That the purchasers of the right of taking said fish, shall in all respects conform themselves to such regulations as the committee aforesaid shall publish in their conditions of sale, and for each offence in breaking said regulations, shall forfeit and pay the sum of twenty dollars.

SECT. 9. *Be it further enacted*, That any of the committee aforesaid may be admitted as witnesses in any prosecution for the breach of any regulations respecting said fishery; and said committee shall receive for their services, out of the proceeds of said fishery, seventy cents to each person for each day's service.

SECT. 10. *Be it further enacted*, That all laws heretofore made respecting said river, be and the same are hereby repealed, excepting so far as may affect any penalties already incurred for the breach of said laws.—[March 1, 1798.

AN ACT for the better Preservation of the Fish called Alewives, in Mill River, so called, in Taunton, in the County of Bristol, and for regulating the Taking of said Fish in said River.

(Page 220.) SECT. 1. *Be it enacted*, That from and after the passing of this act, the selectmen of the said town of Taunton, for the time being, shall be and they are hereby constituted inspectors of the said Mill River, whose duty it shall be, within ten days after being chosen to their said office of selectmen, to take an oath for the faithful discharge of their said trust as inspectors, before some justice of the peace for said county of Bristol, or the clerk of the said town of Taunton; and also, within the same ten days, to post up at some public places in said town, near said river, an advertisement under the hands of the major part of them, pointing out the manner, time and place, in which said fish may be taken in said river (provided that the time of taking said fish shall not exceed three days in each week). And if any person shall pull down or deface such advertisement, he or she shall forfeit and pay the sum of one dollar. And if any person shall presume to take any of said fish in said river, at any other time or place, or in any other manner, than those mentioned in said advertisement, he or she so offending shall forfeit and pay for each offence a sum not less than one dollar nor more than twenty dollars.

SECT. 2. *Be it further enacted*, That the inhabitants of said town, at any town meeting legally warned for that purpose, may, in such manner as they shall think proper, sell the exclusive right of taking said fish in said river under such regulations as they may judge necessary : *provided, always*, that no one sale shall be for more than one year, and that the purchasers of said right shall not be allowed to sell fish for more than twenty-five cents per hundred.

SECT. 3. *Be it further enacted*, That in any year when the said inhabitants shall sell the exclusive right of taking said fish as aforesaid, the said inspectors shall post up their advertisement as aforesaid, forbidding all persons, other than the said purchasers or their agents, to take any of said fish in said river, at any time or place whatever; and also forbidding the said purchasers to take any of said fish, save at the times and places and in the manner mentioned in the conditions of sale.

SECT. 4. *Be it further enacted*, That the said inspectors, or the major part of them, be and they are hereby authorized and empowered to open any dam or the sluice of any mill or other water-works erected or that may be erected on or over the said river, so that there shall be a passage-way of such width (not exceeding twelve feet) and depth as shall be sufficient for the passing of said fish up said river at the expense of the owner or owners of such dam or sluice: *provided*, such owner or owners shall neglect to open the same when thereto required by the inspectors or the major part of them; and the dam or sluice that may be so opened, shall continue open for so long a time in the months of April and May annually, as the said inspectors or the major part of them shall judge necessary; and if any person or persons shall obstruct the passage-ways allowed or ordered by the said inspectors or the major part of them, in any dam or sluice-way, or shall obstruct the passage of said fish in any other part of said river than shall be permitted by the said selectmen, conformably to this act, such person or persons so offending shall forfeit and pay a sum not exceeding three hundred dollars nor less than ten dollars.

SECT. 5. *Be it further enacted*, That all penalties incurred by the breach of this act may be sued for and recovered by any of said inspectors in any court in the county of Bristol proper to try the same; and all sums so recovered shall be one half to the use of the prosecutor and the other half to the use of the said town of Taunton; and in case any minor or minors shall offend against any part of this act, and thereby incur any of the penalties aforesaid, in all such cases the parents, masters or guardians of such minor or minors shall be answerable therefor in an action to be brought against such parents, masters or guardians as for his or their personal offence.

SECT. 6. *Be it further enacted*, That the several laws heretofore passed authorizing the proprietors of the slitting mills, standing on the said river, to stop the water and make use of the same three days in each and every week during the months of April and May annually, be and the same are hereby repealed.—[March 2, 1798.

AN ACT to prevent the Destruction and to regulate the Catching of the Fish called Alewives, in the Rivers and Streams in the Town of Falmouth, in the County of Barnstable.

[Amended March 1, 1799; Repealed 1847, ch. 94. Additional Acts, 1825, ch. 63; 1851, ch. 98; 1858, ch. 130.]

(Page 222.) SECT. 1. *Be it enacted*, That the town of Falmouth shall be and hereby are empowered and directed, at their meeting for the choice of

town officers in March or April annually, to choose five or more persons, being freeholders in the said town, to see that this act be duly observed; and each person so chosen shall be sworn faithfully to discharge the duties required of him by this act: and the said committee shall meet together annually, on or before the thirtieth day of March, at such place as they or a majority of them shall appoint; and the major part of the committee present at such meeting, being not less than three in number, are hereby authorized and empowered to order the times when (which shall not exceed three days in a week), the places where, and the manner in which said fish may be taken; and shall notify the inhabitants thereof, by posting up notifications in several public places in said town of Falmouth, within ten days after their being chosen as aforesaid; and the said committee or the major part of them are hereby fully authorized and empowered to cause the natural course of the streams through which the said fish pass to be kept open and without obstruction, to remove any such as may be found therein, and shall have authority for those purposes to go on the land or meadow of any person through which such streams run, without being considered as trespassers; and shall open or cause to be opened any sluice-way through any dam now erected, or that may be hereafter erected on or over any of the said rivers or streams (between the ponds where the said fish usually cast their spawns and the sea), at the expense of the said town of Falmouth: *provided*, the owner or owners of any such dam shall neglect to open the same when thereto required by the said committee; and the dam or sluice so opened shall continue open in every year to such depth and width as shall be necessary for a passage for said fish, and for such term of time between the first day of April and the tenth day of June, as the major part of the said committee shall judge necessary; and if any person or persons shall molest or hinder the said committee or either of them in the execution of his or their said office, or shall obstruct the passage-ways or sluice-ways allowed or ordered by the said committee, or the major part of them, each person so offending shall, on conviction before any justice of the peace for the county of Barnstable, pay a fine for every such offence not exceeding ten dollars nor less than three dollars.

SECT. 2. *Be it further enacted*, That if any person or persons shall take any of the said fish in the said rivers, streams or ponds aforesaid, at any time, in any place, or in any manner other than shall be allowed by the said committee as aforesaid, each person so offending for each and every offence shall, on conviction thereof, pay a fine not exceeding three dollars nor less than one dollar, if the quantity of fish so taken is less than one barrel, but if the quantity so taken shall be one barrel or more, such person or persons so offending shall forfeit and pay for each and every barrel of fish so taken, the sum of three dollars.

SECT. 3. *Be it further enacted*, That if the committee aforesaid, or either of them, shall detect any person or persons in taking any of the said fish, at any time, in any place, or in any manner otherwise than is allowed by the said committee, or shall find such fish with such person or persons, such person or persons shall be deemed to have taken the said fish unlawfully, and shall be subject to the penalties of this act accordingly; unless such person or persons can make it appear, on trial, that they came by the said fish in some other way.

SECT. 4. *Be it further enacted*, That all the forfeitures incurred by virtue of this act, shall be to the use of the said town of Falmouth, to be recovered by an action on the case, in any court proper to try the same, to be brought by the treasurer thereof.—[March 2, 1798.

AN ACT authorizing the Inhabitants of the Towns of Watertown, Weston and Waltham, in the County of Middlesex, to regulate the Taking of the Fish called Shad and Alewives within the Limits of the said Town.

[Repealed 1815, ch. 56. Additional Act 1826, ch. 76.]

(Page 224.) SECT. 1. *Be it further enacted*, That from and after the ninth day of February, which will be in the year of our Lord seventeen hundred and ninety-nine, it shall be lawful for the inhabitants of the towns aforesaid to sell the right, and regulate the times, places and manner of taking the said fish, within the limits of said towns, not exceeding, in point of time, three days in each week; and the inhabitants of said towns respectively, at their annual meeting in March, are hereby authorized and empowered to appoint agents, whose duty it shall be to carry into execution the purposes of this act.

SECT. 2. *Be it further enacted*, That there shall be a meeting of the agents of said towns, holden annually on the last Monday in March, at two of the clock in the afternoon, at the public house in said Watertown which may be situated the nearest the bridge, in same town, over Charles River; at which meeting the agents so chosen may agree on the place of holding and the manner of calling any intermediate meeting; may choose a clerk, whose duty it shall be to record in a book, kept for that purpose, all votes, regulations and orders which may be passed by said agents, or the major part of them, during the period for which they are chosen; and at the end of said period, it shall be the duty of said clerk to transfer said book to the person who may be chosen to succeed him in said office.

SECT. 3. *Be it further enacted*, That the agents aforesaid, at any meeting established by this act, or called pursuant to any agreement of said agents, may, in behalf of said towns, and for their use and benefit, sell the right, and regulate the times, places and manner of taking said fish within the towns aforesaid, not exceeding the time aforesaid; and the proceeds of the sale of said right shall, from time to time, be divided between said towns, according to the sums they shall, respectively, pay towards the maintenance of the bridge, in said Watertown, over Charles River; and the said agents shall forthwith, after establishing such rules and regulations, and determining by whom said fish may be taken, cause a copy thereof, under their hands, to be posted in some public place in each of said towns; and if any person or persons, other than those to whom said right shall be sold as aforesaid, shall take any fish of the description aforesaid, within the towns aforesaid; or if any person to whom said right shall be sold as aforesaid, shall take any of said fish at any other time, in any other place, or in any other manner than shall be expressed in the conditions of the sale to him, such person so offending shall forfeit and pay treble the value of the fish so taken, to be recovered in an action on the case, to the use of any person who may sue for the same.

SECT. 4 *Be it further enacted*, That if the agents of either of the towns aforesaid shall neglect to attend at any meeting, called as aforesaid or ap-

pointed by this act, the votes passed, and the orders and regulation established by the major part of the agents who shall attend said meeting, shall be as binding on said towns, and as good and valid to all intents and purposes, as they would be were the whole of said agents present at said meeting. And in deciding any question which may come up before said agents, in executing the duty assigned them by this act, one vote only shall be allowed to each town.—[March 2, 1798.]

AN ACT in addition to an Act entitled "An Act regulating the Taking of the Fish called Alewives, in the Town Brook, so called, in the Town of Plymouth," passed the twentieth day of June, in the year of our Lord one thousand seven hundred and eighty-nine.

[Refers to June 20, 1789.]

(Page 241.) SECT. 1. *Be it enacted*, That the said act to which this is an addition, and all parts, clauses and provisions thereof, shall extend to include one other brook in said town of Plymouth, known by the name of Fresh-Pond Brook, in the second precinct of said town; and the taking of the fish aforesaid in Fresh-Pond Brook is hereby authorized in the same manner and under the same rules, regulations and restrictions, in every respect, as the same is authorized in and by the act to which this is an addition, in the aforesaid town brook, and no otherwise, anything in said former act notwithstanding: *provided, nevertheless*, that the inhabitants of the town of Plymouth may, at their annual meeting in March or April, fix and determine at what place in Fresh-Pond Brook said fish may be taken.—[June 25, 1798.]

AN ACT in addition to the several Acts respecting the Proprietors of Middlesex Canal.

(Page 241.) [A clause from Sect. 1.]—*Provided, nevertheless*, that nothing herein shall be construed to repeal or annul the restrictions under which the said proprietors and corporation are laid by former acts, respecting the waters of Shawshine River, or the ponds, brooks or streams emptying their waters into the same.—[June 25, 1798.]

AN ACT in addition to an Act entitled "An Act for regulating the Taking of Shad, Alewives and other Fish, in Neponset River, and the several Streams from the Ponds called Punkapog and Massapog." (March 16, 1797.)

(Page 271.) SECT. 1. *Be it enacted*, That the town of Stoughton, in the county of Norfolk, may choose a committee to inspect the fishery in Neponset River, and the streams aforesaid, in the same manner, and who shall be under the same regulations, subject to the same duties, and have the same powers, as the like committees for the several towns adjoining the aforesaid river and streams: and said town of Stoughton shall have their proportionable part with the town of Canton, of all profits arising from said fishery, and also of all fines and forfeitures incurred by the breaches of the act to which this is an addition, in the same manner, and to the same extent it would have had, had the act, passed the twenty-third day of February, in the year of our Lord one thousand seven hundred and ninety-seven, entitled "An Act to divide the town of Stoughton, in the county of Norfolk, and to incorporate the northerly part thereof into a town by the name of Canton," never have been passed; anything in either of the aforesaid acts to the contrary notwithstanding.—[Feb. 19, 1799.]

1799.

AN ACT to regulate the taking of the said Fish called Alewives, in Monatiquot River, in the Town of Braintree.*

[Additional Act, p. 591, 5th vol.; 1812, ch. 154.]

(Page 285.) **SECT. 1.** *Be it enacted*, That the town of Braintree, at their meeting in March or April annually, may and they are hereby authorized to regulate the taking of the fish called alewives, in Monatequot River, by fixing upon the times, places and manner of taking said fish, and the price at which said fish when taken may be sold, not exceeding twenty-five cents for one hundred fish; and also to direct their committee to farm out or sell the privilege of taking said fish; which regulations, when made, shall remain in force for one year next ensuing, and afterwards until new regulations in manner aforesaid shall be adopted by the town. And it shall be the duty of said town, at their aforesaid meeting annually, to choose three discreet persons, whose duty it shall be to inspect said river, to cause the regulations respecting said fishery to be carried into effect, and to prosecute all violations thereof that shall come to their knowledge, and who shall also be sworn to the faithful performance of their duty, in like manner and under like penalties as other town officers.

SECT. 2. *Be it further enacted*, That the owners or occupiers of dams across said river shall, during the time said fish are passing up, open a passage through, over or round their respective dams, sufficient for the passage of said fish, in the opinion of the committee, under penalty of ten dollars for each and every twenty-four hours that they shall neglect to open a passage as aforesaid, from and after said owner or occupier has been notified and required, in writing, by said committee, for the space of two days, so to do.

SECT. 3. *Be it further enacted*, That if any person shall make any wear across said river, or cause any obstruction to the free passage of said fish, or if any person shall presume to take any of said fish, except at the places and on the days allowed by the town, or if any person other than the purchasers or farmers of the said privilege, or those employed by them, shall presume at any time to take any of said fish, or if the person taking said fish shall sell them at a higher rate than the town shall allow, the person so offending shall for each offence forfeit and pay a sum not more than five dollars nor less than one dollar, at the discretion of the justice before whom the same may be tried.

SECT. 4. *Be it further enacted*, That all penalties incurred by a breach of any regulations respecting said fishery, may be sued for before any justice of the peace for the county of Norfolk, by the treasurer of said town; and the committee aforesaid may be competent witnesses in any prosecution for a breach of this act, notwithstanding they may be complainants in said prosecution.

SECT. 5. *Be it further enacted*, That all fines recovered for the breach of this act shall be for the use of the town of Braintree.

SECT. 6. *Be it further enacted*, That the committee chosen by virtue of this act shall be compensated for their service by the town of Braintree, at such rate as the town shall agree upon at the time they are chosen.—[March 1, 1799.]

* This Act repealed 1817, ch. 151.

AN ACT in addition to and for the Amendment of an Act entitled "An Act to prevent the Destruction and to regulate the Catching of the Fish called Alewives, in the Rivers and Streams in the Town of Falmouth, in the County of Barnstable."*

[Refers to March 2, 1798. Additional Acts, 1825, ch. 63; 1851, ch. 98; 1858, ch. 130.]

(Page 289.) *Be it enacted*, That the committee to be chosen conformably to the act to which this is in addition, be and they hereby are authorized to permit the taking of said fish five days in a week, if they see fit, during the period provided by said act for said rivers and streams to be kept open, anything in said act to the contrary notwithstanding.—[March 1, 1799.

AN ACT regulating the Taking of the Fish called Alewives in Island Creek Brook (so called), in the Town of Duxbury.

(Page 289.) SECT. 1. *Be it enacted*, That the fish called alewives may be taken from two rods below the bridge over said brook, and as far up said brook as the width of the road, commonly called Plymouth road, and shall not be taken in any other part thereof, and at such times only as the committee, who may be appointed by said town as is hereafter provided, may direct.

SECT. 2. *Be it further enacted*, That the inhabitants of said town of Duxbury, at their meeting for the choice of town officers in March or April annually, be and they hereby are authorized and directed to appoint three or five persons a committee to oversee the taking said fish as aforesaid, which committee shall distribute the fish taken by them, or under their direction, as equally as circumstances will admit, to such of the inhabitants of said town as may apply for the same; and for the fish so supplied and delivered, the committee aforesaid shall demand and receive of the person or persons applying therefor, payment at such rate or rates as the inhabitants of the said town, at their annual meeting in March or April, may direct, excepting of such poor persons as may be named in a list to be annually made out by the selectmen of said town, and who, in the opinion of the selectmen, are unable to pay for the same, which list shall be given to the committee, and the person or persons borne on the same shall be supplied with such quantities of said fish gratis, as the committee may think expedient. And the committee aforesaid shall have such allowance for their services as the inhabitants of said town, at the time of appointing said committee, shall determine; and shall annually, in the month of September next following their appointment, exhibit their accounts to the selectmen of said town for settlement and allowance, and pay the balance remaining in their hands, if any, to the treasurer of the town of Duxbury, for the town's use.

SECT. 3. *Be it further enacted*, That the said committee, or the major part of them, be and hereby are authorized and empowered to open any dam or the sluice of any mill or other water-works erected, or that may be erected, on or over said brook, at the expense of the owner or owners of such dam or sluice, provided such owner or owners shall neglect to open the same when thereto required by said committee, or the major part of them as aforesaid; and the dam or sluice that may be so opened shall continue open to such depth and width, and for so long a time as the said committee or the major part

of them shall judge necessary; and if any person or persons shall obstruct the passage-way allowed or ordered by the said committee or the major part of them, in any dam or sluice-way, or shall obstruct the passage of said fish in any other part of said brook than is permitted by this act, such person or persons so offending shall forfeit and pay a sum not exceeding one hundred and fifty dollars nor less than thirty dollars.

SECT. 4. *Be it further enacted*, That if any person or persons, other than the said committee, or such persons as shall be by them employed, shall take any of the said fish in the said brook, or any part of it, at any time, or by any means whatsoever, each person so offending shall forfeit and pay a sum not exceeding ten dollars nor less than two dollars for every such offence.

SECT. 5. *Be it further enacted*, That all penalties incurred by the breach of this act may be sued for and recovered by the treasurer of the town of Duxbury, for the time being, in any court in the county of Plymouth proper to try the same; and all sums so recovered shall be appropriated to the use of said town; and in case any minor or minors shall offend against any part of this act, and thereby incur any or either of the penalties aforesaid, in all such cases the parents, masters or guardians of such minor or minors shall be answerable therefor; and in case of a prosecution of such minor or minors for any offence, the action shall be commenced against the parent, master or guardian of such minor or minors respectively, and judgment be rendered against any parent, master or guardian in such case, in the same manner as for his or their personal offence.

SECT. 6. *Be it further enacted*, That no person, by reason of being an inhabitant of said town, or one of said committee, shall be hereby disqualified from being a witness in any prosecution for a breach of this act.

SECT. 7. *Be it further enacted*, That all laws heretofore made and provided for regulating the alewife fishery on said brook, be and the same are hereby repealed.—[March 1, 1799.]

1800.

AN ACT for regulating the Alewife Fishery in the Gulf Stream, so called, that runs between the Towns of Scituate in the County of Plymouth, and Cohasset in the County of Norfolk.

[Repealed in part June 19, 1801.]

(Page 375.) Whereas the town of Scituate has legally granted to Elisha Doane, his heirs and assigns forever, all their right, title and interest in and to the said Gulf Stream, on certain conditions in that grant specified; and whereas the town of Cohasset hath legally granted to the said Elisha Doane and Isaac Smith, their heirs and assigns forever, all their right and title in and to the said Gulf Stream, on certain conditions in their grant mentioned; which said conditions, stipulated by said towns, appear to have been complied with on the part of said Doane and Smith; and whereas the said Doane hath agreed "that if the flood-gates of the said Doane's mill-dam should not, in the passage of the said fish up the stream, open during the flood-tide, by reason of the water above, the proprietors of said mill shall draw off so much water from the mill-pond as to cause said gates to open on the flood-tide; and if the proprietors of said mill shall refuse or neglect to draw off said water from said pond sufficient for the gates to open as aforesaid, the fish-wardens hereafter mentioned, duly authorized for that

purpose, they shall have authority to draw off from said pond so much water as to cause said gates to open as aforesaid, in such manner as shall be least detrimental to the proprietors of said mill”:

SECT. 1. *Be it enacted*, That from and after the passing this act, the selectmen of the towns of Scituate and Cohasset shall be fish-wardens, and shall be sworn as other town officers, and shall be under like penalties in case of refusal; and said wardens shall have authority to regulate the times and places and manner of taking said fish; and also the prices at which said fish may be sold, not exceeding twenty-five cents for each hundred; also to farm out or sell for one year, after giving public notice in each of said towns, the privilege of taking said fish, under such regulations as the wardens shall previously establish; and it shall be the duty of said wardens to cause to be removed all obstructions to the passage of said fish up to the pond where they usually cast their spawn, and to open, or cause to be opened, sufficient sluice-ways or passages for said fish through the mill-dams that now are or that hereafter may be erected above said Doane’s mill, at the expense of the owners thereof: *provided*, that the said wardens shall exercise no authority at said Doane’s mill than what is conceded by said Doane, and is contained in the preamble of this act.

SECT. 2. *Be it further enacted*, That if any person shall shut any sluice-ways, or make any wears or other obstruction to the free passage of said fish, during such parts of the months of April and May annually, as the wardens shall determine to be necessary for the free passage of said fish, the person so offending shall forfeit and pay a sum not exceeding one hundred dollars, and if any person shall break any of the regulations established by said wardens, the person offending therein shall forfeit and pay a sum not exceeding ten dollars.

SECT. 3. *Be it further enacted*, That it shall be the duty of the fish-wardens to prosecute for all breaches of this act, and for all such regulations as shall be established in pursuance thereof, in any court proper to try the same, either in the county of Plymouth or Norfolk.

SECT. 4. *Be it further enacted*, That the proceeds of said fishery, as well as the amount of all fines recovered by said wardens, shall equally accrue to the said towns of Scituate and Cohasset, and be paid to the respective treasurers of said towns.

SECT. 5. *Be it further enacted*, That any fish-warden, as well as any inhabitant of the respective towns of Scituate and Cohasset, may be a competent witness in any prosecution under this act.—[March 4, 1800.

AN ACT in addition to an Act, entitled “An Act to prevent the Destruction of the Fish called Alewives, in Taunton Great River, so called, in the County of Bristol, and also to regulate the Catching the said Fish therein for the future.”

[Refers to March 19, 1793.]

(Page 381.) SECT. 1. *Be it enacted*, That no two seines or drag-nets shall be set, used or drawn in said river, so that in drawing or sweeping with said two seines or drag-nets, any two points of said river, lying and being within twenty rods of each other, shall by different seines or drag-nets be drawn over, or swept on the same day. And any person or persons who shall offend herein by approaching within twenty rods of any part of the river, that shall have been occupied by another seine or drag-net on

the same day, shall forfeit and pay for each offence the same sum, to be recovered in the same manner, and to the same uses as is provided for using seines and drag-nets contrary to the act to which this is in addition.—[March 4, 1800.

1801.

AN ACT for providing a Passage for Fish from Mystic River to Ell Pond, so called, in the Town of Malden.

[Addition and part repeal March 9, 1804; 1794, p. 512; 1804, p. 399.]

(Page 431.) Whereas sundry inhabitants of the town of Malden, and Samuel Tufts, have made an agreement respecting the passage of fish in the waters leading from Mystic River to Ell Pond, in said town:

SECT. 1. *Be it enacted*, That it shall and may be lawful for Cotton Sprague and others, being sundry inhabitants of the westerly part of Malden, who have petitioned this court to adopt some measure for securing a passage for shad and alewives from Mystic River to Ell Pond, so called, in said Malden, at their own expense, to construct a passage-way for said fish, over the mill-dam of Samuel Tufts, which stands on the stream leading from said pond, and for that purpose to cut away so much of the waste-board between the two easternmost posts of said dam as to reduce the same four inches below his right to flow, so as to admit of said passage-way to pass over said dam in that place, and so up said stream; which said passage-way shall be built and kept in repair, for the term of five years from the passing of this act, from the tenth day of April to the twentieth day of May inclusive, in each year, at the expense of said petitioners, unless at any time said passage-way should be wantonly or maliciously injured or destroyed, in which case it shall be the duty of the inhabitants of said town of Malden to repair the same; and if the inhabitants of said town shall neglect or refuse to repair the same accordingly, within seven days after the same shall have been injured as aforesaid, it shall be lawful for any one or more of said petitioners forthwith to repair the same, and to recover of said inhabitants double the expense of such repairing, with costs of suit, by an action on the case, in any court proper to try the same.

SECT. 2. *Be it further enacted*, That it shall be the duty of the said Samuel Tufts, during the said term of five years, to keep his said dam in as good repair as it now is; and if at any time the same shall be out of repair, and he shall not repair the same in a reasonable time, that it shall and may be lawful for any one or more of the petitioners to repair the same, and to recover of said Samuel Tufts double the amount of the expense thereof with costs of suit, by an action of the case, in any court proper to try the same; and also, that the said Samuel Tufts shall not improve any mill, from the fifteenth day of April to the fifteenth day of May annually, except his mills for grain.

SECT. 3. *Be it further enacted*, That it shall be lawful for said town of Malden, at their annual meeting in March or April annually, during said term, to choose a committee of three, five or seven freeholders of said town, whose duty it shall be, and they or the major part of them are hereby empowered to keep the stream aforesaid free and clear of all obstructions to the passage of said fish through the whole course of said stream from Mystic River to Ell Pond: *provided*, that nothing herein contained shall give

said committee any right to destroy or impair said mill-dam : *provided, also*, that nothing in this act contained shall be so construed as in any manner to affect any interest in said stream, or the privileges or appurtenances thereto belonging, claimed by said town or said Samuel Tufts.

SECT. 4. *Be it further enacted*, That during the said term of five years, it shall not be lawful for any person to take any shad or alewives in said stream, oftener or more than two days in each week, viz.: from sunrise on Monday to sunrise on Tuesday morning; and from sunrise on Friday morning to sunrise on Saturday morning, in each week. And if any person shall offend against this prohibition, he shall forfeit and pay the sum of ten cents for each fish which he may so take, to be recovered, with costs of suit, by any one or more of said committee who may first sue for the same, by action of debt in any court proper to try the same; one half of which forfeiture shall enure to the use of said town, and the other half to him or them who may sue therefor.

SECT. 5. *Be it further enacted*, That this act shall continue and be in force for and during the term of five years next after the passing the same, and no longer, except as to any prosecutions for any penalties, or actions for recovery of any expenses which may then be depending according to the provisions thereof.—[March 7, 1801.

AN ACT in addition to an Act, entitled “ An Act to regulate the Alewife Fishery in the Town of Bridgewater, in the County of Plymouth, and for repealing all Laws heretofore made for that purpose,” passed in the year of our Lord one thousand seven hundred and ninety-seven.

[Refers to Feb. 10, 1797.]

(Page 433.) Whereas it is represented to this court, that by reason of the broken state of the dam, at a place called the Great River Mills, in Bridgewater, it is impracticable to take fish at said place; therefore,

SECT. 1. *Be it enacted*, That it shall and may be lawful for the town of Bridgewater, the present year only, to take said fish at such times and places as were provided by an act entitled “ An Act for regulating the Alewife Fishery in the Town of Bridgewater, in the County of Plymouth, and for repealing all laws heretofore made for that purpose,” passed the ninth day of March, in the year of our Lord one thousand seven hundred and ninety-one, the law to which this is an addition to the contrary notwithstanding : *provided*, said town shall at their annual meeting in March instant, vote the same, which the town are hereby authorized to do at said meeting; any law to the contrary notwithstanding.—[March 7, 1801.

AN ACT for regulating the Taking and Disposing of the Fish called Alewives within the limits of the Town of Weymouth, and for the more effectually securing to the said Town the advantages thereof.

[Additional Act, 1825, ch. 48.]

(Page 434.) Whereas the town of Weymouth, in the county of Norfolk, at a very considerable expense, purchased and opened a passage for the fish called alewives into Whitman's Pond and the Great Pond, so called, being wholly within said town, and conveyed into them a number of said fish, whereby a great increase has arisen; it is therefore but just and reasonable that the benefits arising from the taking and disposing of the said fish should be wholly vested in the said town : wherefore,

SECT. 1. *Be it enacted*, That the taking and disposing of the said fish called alewives shall be under the care and management of a committee of the said town, who shall dispose of them in such manner, for the benefit of said town, as they shall judge best, and account with the treasurer of said town for the proceeds thereof, on or before the first day of November annually, and the money arising therefrom shall be appropriated to the use of schooling in said town; and the said committee shall have a reasonable allowance for their service, and lay their accounts before the selectmen of said town for allowance and approbation; and the said committee shall consist of five freeholders, chosen by ballot in the months of March or April annually, who shall be sworn to the faithful discharge of their duty; and if any person chosen to serve on the said committee shall refuse to serve, or if chosen shall neglect to take said oath for the space of seven days after being legally notified of such choice, he shall forfeit and pay to the use of said town the sum of ten dollars.

SECT. 2. *Be it further enacted*, That the said committee, or either of them, shall have full power and authority to remove from or out of the river, brooks or streams leading to the said ponds, any obstructions that may be made to the free passing of the said fish into the said ponds, or repassing from them into the sea; and the said committee's going, or either of them, on to the land of any person or persons for this purpose, shall not be deemed or held as a trespass; and the said committee, or the major part of them, shall determine the particular places where the said fish shall be taken, and give public notice thereof by posting up one or more notifications in some conspicuous place or places in the said town, on or before the first day of May annually: *provided, however*, that the said fish shall not be taken on any other days than Mondays, Wednesdays and Fridays, between the rising and setting of the sun on said days, nor by any other instrument or ways than by a scoop or dip-net.

SECT. 3. *Be it further enacted*, That no person shall catch or take any of the said fish in any of the rivers, brooks or streams leading to or from the said ponds, without the direction or leave of the said committee, or the major part of them; and whoever shall presume, at any time hereafter, to take, kill or haul ashore any of the said fish, with seines or drag-nets, in either of the ponds aforementioned, or in Weymouth Back River, so called, or in the river, brooks or streams through which the said fish pass into the said ponds, or shall with any seines or drag-nets, or in any other way obstruct the passage of the said fish to or from the said ponds, or either of them, or shall obstruct the said committee, or either of them, in the execution of their duty, in all and every of these cases the offender shall for each offence forfeit and pay a sum not exceeding thirteen dollars nor less than ten dollars; and in case the offence be committed in the night, a sum not exceeding thirty dollars nor less than twenty dollars.

SECT. 4. *Be it further enacted*, That it shall be the duty of the said committee to give notice to the treasurer of the said town of Weymouth of all offences committed against this act that shall come to their knowledge; and the treasurer thereof is hereby vested with full power and authority to sue for and recover, from time to time, all fines and forfeitures incurred by any breach of this act, in any court proper to try the same; and such fines and forfeitures shall be to the use of the said town, saving where any person

shall give information of any breach of this act, the informer, upon conviction of the offender, shall be entitled to one-third part of the forfeiture; and no person shall be considered as disqualified from being an evidence on any trial that may be had pursuant to this act on account of his being an inhabitant of the said town of Weymouth, or of his being one of the committee aforesaid.

SECT. 5. *Be it further enacted*, That an act passed in the year of our Lord one thousand seven hundred and eighty-eight, entitled "An Act empowering the town of Weymouth to regulate and order the taking and disposing of the fish called shad and alewives within the limits of that town," be and the same is hereby repealed, except for the purpose of recovering any fines or forfeitures that may have been incurred under the said act.—[March 7, 1801.

AN ACT to regulate the Alewife Fishery in the Brook running out of Wakepee Pond (so called) into the Sea, in the Indian Plantation, called Marshpee, in the County of Barnstable.

[Additional Act, Feb. 22, 1803.]

(Page 436.) SECT. 1. *Be it enacted*, That the overseers of the Indian plantation of Marshpee, or any two of them, shall annually appoint one or more suitable person or persons to inspect said brook, and to open, or cause to be opened, a sufficient passage-way for the fish to pass and repass through any mill-dams that now are or may be hereafter erected: *provided*, the owners of any such dams shall refuse or neglect to open such sufficient passage-way themselves, and cause the same to be kept open from the first day of April to the twenty-fifth day of May annually, and to prevent any wears or obstructions of any kind which may be made across said brook, or any part thereof, which may impede the passage of said fish. And said committee shall regulate the times and places for taking said fish, giving liberty to the Indian inhabitants to take as many of said fish as may be needful for their own use.

SECT. 2. *Be it further enacted*, That if any person or persons shall erect any wear, or obstructions of any kind, across said brook, so as to obstruct the passage of said fish, he or they so offending shall forfeit and pay a sum not exceeding ten dollars nor less than three dollars for each offence.

SECT. 3. *Be it further enacted*, That any person not an inhabitant of the said plantation, who is desirous of purchasing any of the said fish, such person shall pay a sum not exceeding twenty-five cents for each hundred, to be delivered them by such person or persons as the said committee shall appoint, and the proceeds of the same shall be applied to the exclusive benefit of the said Indian and mulatto inhabitants of said plantation.

SECT. 4. *Be it further enacted*, That all forfeitures and penalties which may be incurred by any breach of this act, shall be recovered by any one or more of the said board of overseers of the said Indian plantation, in any court in the said county of Barnstable proper to try the same; and all such forfeitures shall be applied to the exclusive benefit of the said Indian and mulatto inhabitants of said plantation of Marshpee.—[June 13, 1801,

AN ACT repealing part of an Act entitled "An Act for Regulating the Alewife Fishery in the Gulf Stream, so called, which runs between the Towns of Scituate, in the County of Plymouth, and Cohasset, in the County of Norfolk," passed the fourth day of March in the year of our Lord eighteen hundred.

(Page 450.) Whereas the beneficial effects contemplated by the act aforesaid have not been produced thereby:

SECT. 1. *Be it enacted*, That the aforesaid act, so far as it provides that the selectmen of the towns of Scituate and Cohasset shall be fish-wardens, and so far as it respects the opening sluice-ways through the mill-dams that now are, or that may hereafter be erected, above the mill-dam erected by Elisha Doane and others, be and hereby is repealed,—[June 19, 1801.

1802.

AN ACT in addition to the several Acts now in force, regulating the Taking of the Fish called Alewives in the Town of Middleborough.

[Refers to Jan. 23, 1792; Feb. 8, 1793. Additional Act concerning Middleborough, March 6, 1802. Repealed 1815, ch. 111.]

(Page 469.) Whereas doubts have arisen whether the inhabitants of the said town of Middleborough are authorized by law to agree with and hire any person or persons to take said fish and sell them at the price stipulated by law, and to account with the said inhabitants for the net proceeds of the same: therefore,

SECT. 1. *Be it enacted*, That from and after the passing of this act it shall and may be lawful for the inhabitants of said town, at any legal meeting called for that as well as other purposes, by themselves or a committee chosen by them for that purpose, to agree with and hire such person or persons as they may deem proper, to take said fish at any and all of the fishing places in said town, and to dispose of them at the price stipulated by law, being accountable to the inhabitants of said town for the net proceeds of the same.—[Jan. 21, 1802.

AN ACT in further addition to an Act entitled "An Act to regulate the Alewife Fishery in the Town of Bridgewater, in the County of Plymouth, and for repealing all Laws heretofore made for that purpose," passed in the year of our Lord one thousand seven hundred and ninety-seven.

[Refers to Feb. 10, 1797; March 7, 1801.]

(Page 495.) SECT. 1. *Be it enacted*, That it shall and may be lawful for the town of Bridgewater, in the county of Plymouth, hereafter to take the fish called alewives in said town, at such times and places as were provided in an act entitled "An Act for regulating the alewife fishery in the town of Bridgewater, in the county of Plymouth, and for repealing all laws heretofore made for that purpose," passed the ninth day of March, in the year of our Lord one thousand seven hundred and ninety-one; any law to which this is in addition to the contrary notwithstanding.—[February 27, 1802.

AN ACT to prevent the Destruction of the Fish called Alewives, in their passage up and down in the River and other Streams in the Town of Kingston, in the County of Plymouth, and for regulating the Taking and Disposing of said Fish, and for repealing an Act entitled "An Act to prevent the Destruction of the Fish called Alewives, in their passage up the Rivers and Streams in the Town of Kingston, in the County of Plymouth."

[This Act in part repealed 1819, ch. 125.]

(Page 502.) SECT. 1. *Be it enacted*, That the inhabitants of said town of Kingston, at their annual meeting in March or April, be and are hereby authorized and empowered to choose a committee of five or more persons, to see that the laws respecting the passage-ways for said fish be observed; and each person so chosen shall take an oath faithfully to discharge the duties required of him by law; and the said committee shall oversee the taking of said fish in said town, and shall distribute the fish taken by them, or under their direction, as equally as circumstances will admit, to such of the inhabitants of said town as may apply for the same; and for the fish so supplied and delivered, the committee aforesaid shall demand and receive of the person or persons receiving said fish, payment therefor, at such rate or rates as the inhabitants of said town, at their annual meeting in March or April, may direct; excepting of such poor persons as may be named in a list, annually to be made out by the selectmen of said town, and who in the opinion of the selectmen are unable to pay for the same; which list shall be given to the committee, and such persons borne on the same shall be supplied with such quantities of said fish, gratis, as the committee may think expedient. And the committee aforesaid shall have such allowance for their services as the inhabitants of said town, at the time of appointing said committee shall determine; and shall annually, in the month of September next following their appointment, exhibit their accounts of the selectmen of said town for settlement and allowance, and pay the balance remaining in their hands, if any there be, to the treasurer of the town of Kingston for the town's use.

SECT. 2. *Be it further enacted*, That the said committee, or the major part of them, be and are hereby authorized and empowered to open any dam, or the sluice of any mill or other water-works, erected or that may be erected on or across the river, or any of the streams in said town, at the expense of the owner or owners of such dam or sluice: *provided*, such owner or owners shall neglect to open the same when thereto required by said committee, or the major part of them, as aforesaid. And the said committee shall also have full power to remove any other obstructions that may be made to the free passage of said fish, in the rivers and other streams into the several ponds in said town, and for their repassing from said ponds into the sea. And the said committee, or either of them, going or passing on or across the lands of any person, for any of the aforementioned purposes, shall not be deemed or held as a trespass; and any dam, or sluice, or passage-way that may be opened as aforesaid, shall continue open, to such depth and width, and for such length of time, as shall be necessary for the passing and repassing of the said fish as aforesaid. And if any person or persons shall obstruct the passage-way allowed or ordered by said committee, or the major part of them, in any dam or sluice-way, or shall obstruct the passage of them in the river, or any of the streams in said town, such person or persons so offending, shall forfeit and pay a sum not exceeding one hundred dollars, nor less than fifty dollars.

SECT. 3. *Be it further enacted*, That if any person or persons, other than the said committee, or such persons as shall be by them employed, shall take any of the said fish, in the river or in any part of any of the streams in said town, at any time, or by any ways or means whatsoever, each person so offending shall forfeit and pay a sum not exceeding twenty-five dollars, nor less than five dollars for every such offence.

SECT. 4. *Be it further enacted*, That the town of Kingston, at their meeting in March or April annually, shall appoint particular places in each stream in said town where said fish may be taken; and no committee-man or person by them employed, or purchaser, shall be deemed a trespasser in going on the lands of any person in order to take said fish, on their paying a reasonable compensation therefor, if required. And the committee chosen as aforesaid, shall appoint certain days in each week, from the first day of April annually, not exceeding four for four weeks successively, when the said fish shall be taken; and shall put up notifications in two public places in said town, of the times and places for taking said fish, before the tenth day of April annually.

SECT. 5. *Be it further enacted*, That all penalties incurred by a breach of this act, may be sued for and recovered by the treasurer of the town of Kingston, for the time being, in any court in the county of Plymouth proper to try the same; and all sums so recovered shall be appropriated to the use of said town. And in case any minor or minors shall offend against any part of this act, and thereby incur any of the penalties aforesaid, in all such cases the parents, masters or guardians of such minor or minors shall be answerable therefor; and in case of a prosecution of such minor or minors for any such offence, the action shall be commenced against the parents, masters or guardians of such minor or minors respectively, and judgment be rendered against any parent, master or guardian in such case, in the same manner as for his or their personal offence. And no person by reason of being an inhabitant of said town, or one of said committee, shall be thereby disqualified from being a witness in any prosecution for a breach of this act.

SECT. 6. *Be it further enacted*, That an act entitled "An Act to prevent the destruction of the fish called alewives, in their passage up the rivers and streams in the town of Kingston, in the county of Plymouth," passed on the eighth day of November, in the year of our Lord one thousand seven hundred and eighty-five, be and the same is hereby repealed.—[March 3, 1802.

AN ACT to regulate the Alewife Fishery in the Towns of Lynn, Lynnfield and Reading, in the Counties of Essex and Middlesex, and for repealing all Laws heretofore made for that purpose.

[March 8, 1804. Additional Acts, 1823, ch. 97; 1848, ch. 187.]

(Page 504.) SECT. 1. *Be it enacted*, That it shall and may be lawful for the towns of Lynn and Lynnfield respectively, in the county of Essex, and the town of Reading, in the county of Middlesex, annually, at any legal meeting of the inhabitants of said towns, to sell or otherwise dispose of the privilege of taking the said fish within their respective limits, at such times, not exceeding three days in a week, and places, and under such regulations as the said towns shall respectively direct; and the emolument arising from said privilege shall be severally appropriated by said towns.

to such purposes and uses as the inhabitants thereof shall in town meeting from time to time determine.

SECT. 2. *Be it further enacted*, That if the purchaser or purchasers, manager or managers, or those employed by them, shall presume to take any of the said fish at any other time or place in said towns, or any of them, than shall be by said towns respectively determined; and if any other person or persons whatever, except the purchaser or purchasers, manager or managers of said privilege, or those employed by them, shall presume to take or catch any of said fish in any of the rivers or streams within the boundaries of said towns respectively, otherwise than may be by said towns respectively determined, he or they so offending shall, for each offence, forfeit and pay a sum not exceeding thirteen dollars, nor less than one dollar, at the discretion of the justice before whom the same shall be tried.

SECT. 3. *Be it further enacted*, That if the purchaser or purchasers, manager or managers of said privilege shall, when in his or their power, neglect or refuse to supply any person or persons with said fish, when green, in any quantity not exceeding one hundred to any one person who may apply therefor, at such rates as shall be determined by said towns respectively, not exceeding twenty-five cents for one hundred of said fish, he or they so offending shall for each offence forfeit and pay the sum of one dollar; and if any person shall ask, demand and receive more than twenty-five cents for one hundred of said fish, and in that proportion for a less number, at the landing where said fish are taken, he or they so offending shall, for each offence, forfeit and pay the sum of one dollar.

SECT. 4. *Be it further enacted*, That the said towns of Lynn, Lynnfield and Reading shall, at their respective annual meetings in March or April, severally choose a committee, not exceeding nine, nor less than three, freeholders of said towns, who shall be sworn or affirm to the faithful discharge of the duties enjoined upon them by this act; and it shall be the duty of the said committee to cause the natural course of the rivers, passage-ways or streams through which said fish pass, to be kept open and without obstruction, during the whole time said fish pass up or down in said rivers, passage-ways or streams in each year, and to remove any such as shall be found therein; and to make the said passage-ways wider and deeper, if they or the major part of them shall judge it necessary; and the said several committees, or any two of either of them, paying a reasonable compensation therefor, if demanded, shall have authority, in discharging the duties enjoined upon them by this act, to go on the lands and meadows of any person through which such rivers, passage-ways or streams run, or into any building, mill or other water-works on said rivers or streams, without being considered as trespassers; and any person who shall molest or hinder the said committees, or either of them, in the execution of the business of his or their office, or shall obstruct any passage-way in the said rivers or streams, otherways than may be allowed by the said committees, or a major part of them respectively, he or they so offending shall forfeit and pay for every such offence a sum not exceeding ten dollars, nor less than one dollar, at the discretion of the justice before whom the same shall be tried: *provided, nevertheless*, that nothing in this act shall be considered as authorizing the said committees to injure the proprietor of any mill or water-works further than is necessary in order to give the said fish a good and sufficient passage up the said rivers.

SECT. 5. *Be it further enacted*, That it shall be the duty of the said committees respectively, to prosecute all breaches of this act, and for any two of them to seize and detain in their custody any net which may be found in the hands of any person using the same, contrary to the true intent and meaning of this act, until the person so offending makes satisfaction for his offence, or is legally acquitted therefrom; and also to seize to the use of their respective towns, all such fish as they shall suspect to have been taken contrary to the provisions of this act, unless the person in possession thereof can give satisfactory evidence to such committee that said fish were lawfully taken.

SECT. 6. *Be it further enacted*, That all penalties incurred by any breach of this act shall be recovered by an action on the case, before any justice of the peace within and for the county where the offence shall be committed, allowing an appeal to the court of common pleas of the same county; and all sums of money recovered to either of the said towns as forfeited by this act, shall be for the support of the poor of the said towns respectively; and no person by reason of his being one of either of the said committees respectively, or an inhabitant of either of the said towns, shall be thereby disqualified from being a witness in any prosecutions for a breach of this act.

SECT. 7. *Be it further enacted*, That all laws heretofore made for regulating the fishery in the said towns of Lynn, Lynnfield and Reading, with joint or separate authority, are hereby repealed.—[March 3, 1802.

AN ACT for the preservation and regulating the taking of Fish called Alewives, in the Brook running from the West Quitticus Pond to the East Quitticus Pond, near the line between the Towns of Middleborough and Rochester, in the County of Plymouth.

[Additional Acts, 1809, p. 73; 1862, ch. 202.]

(Page 516.) SECT. 1. *Be it enacted*, That the said towns of Middleborough and Rochester shall annually, at a regular town meeting, respectively choose an agent, whose duty it shall be annually to sell at public auction the privilege of taking said fish at said brook, on Tuesdays, Wednesdays and Thursdays in each week, and publish their conditions of sale, wherein said agents shall express the price at which the purchasers shall sell said fish, which shall be at the rate of twenty-five cents per hundred, and also the manner of taking and disposing of the same.

SECT. 2. *Be it further enacted*, That the agent of the said town of Middleborough the first year, and the agent of the said town of Rochester the second year, and so on alternately forever, shall notify the town clerk of the other town concerned in said fishery, of the time and place in which said agents shall meet, ten days at least before the time of meeting.

SECT. 3. *Be it further enacted*, That if either of said towns shall neglect to choose their respective agents as aforesaid, or if either of such agents shall neglect to give notice to the other, as above required, such delinquent town or agent shall forfeit and pay, to the use of the town which shall choose such agent, for each offence the sum of thirty dollars.

SECT. 4. *Be it further enacted*, That all persons who shall take any of said fish in said brook, and be thereof convicted before any court proper to try the same, shall forfeit and pay a sum not less than two nor more than

ten dollars; except the purchaser or purchasers as aforesaid, or those employed by them, who shall have liberty to take said fish on said days.

SECT. 5. *Be it further enacted*, That it shall be the duty of the said agents, or any other person chosen by the said towns of Rochester and Middleborough respectively, to sue for the recovery of any forfeiture incurred by the breach of the regulations provided in this act; and also of such further regulations as may from time to time be provided and established by said agents. And all fines and forfeitures recovered for any breach aforesaid, except such as are mentioned in the third section of this act, shall, together with the net proceeds of said fishing, be equally divided between said towns; and the treasurers of the towns aforesaid respectively, may, in behalf of their respective towns, recover in an action on the case, of any person or persons, corporation or corporations withholding the same, one moiety thereof, in any court proper to try the same.

SECT. 6. *Be it further enacted*, That the purchasers of the privilege of taking said fish as aforesaid, shall in all respects conform themselves to such regulations and conditions as said agents shall publish in their conditions of sale as aforesaid, and in failure thereof shall forfeit and pay for each offence a fine not exceeding one hundred nor less than ten dollars.

SECT. 7. *Be it further enacted*, That either of the agents for the said towns of Middleborough and Rochester may be admitted as competent witness in any prosecution for the breach of any regulations as aforesaid; and said agents, previous to entering upon the execution of their office, shall be sworn to the faithful discharge of their duty, as other town officers are sworn.—[March 6, 1802.

AN ACT authorizing the Erection of a Dam for certain purposes, and to regulate the Taking of Shad and Alewives in the Town of Middleton.

(Vol. 3, p. 5.) Whereas the waters running from the Great Pond in the town of Middleton, in the county of Essex, to Ipswich River, become so low during the summer season that shad and alewives cannot pass down to said river, but are detained in said pond, and great numbers of them perish during the winter season, to the great loss and damage of the inhabitants of said town:

SECT. 1. *Be it enacted*, That the inhabitants of the town of Middleton aforesaid, may erect and keep in repair a dam, sluice and gate-way in the brook, at the beginning thereof, near the pond leading from said pond to said river, for the purpose of keeping so much water in said pond as may be sufficient to fill said brook, so that the young shad and alewives may pass down from said pond into said river: *provided*, that the water shall not be kept in said pond by means of said dam after the twentieth day of October in every year: *and provided, also*, that the gate in the sluice hereby authorized to be erected, shall not be shut down before the twentieth day of April in every year.

SECT. 2. *Be it further enacted*, That the inhabitants of the said town of Middleton be hereby empowered to choose, at any legal meeting of the inhabitants of said town, committees for the purpose of regulating, as they may think proper, the taking of shad and alewives in the waters of the said pond, and the waters running into and from the same, and preventing obstructions to the said fish passing down said brook, with fines and penal-

ties not exceeding three dollars for each offence, to be recovered in any court proper to try the same, one moiety to the person who may recover the same, and the other moiety to the use of the said town.—[June 18, 1802.

1803.

AN ACT in addition to an Act entitled "An Act to regulate the Catching of Salmon, Shad and Alewives in Merrimack River, and the Streams emptying into the same."

[March 4, 1790. Additional Acts, 1795, p. 35; 1804, p. 441; 1805, p. 577; 1807, p. 56. Additional Act, 1846, ch. 192.]

(Page 43.) Whereas it is found by experience that catching of fish at or near the mouth of Johnston's Brook, so called, emptying into Merrimack River, within the town of Bradford, in the county of Essex, greatly impedes and obstructs the fish from entering and passing up the said stream :

SECT. 1. *Be it enacted*, That from and after the passing of this act no person or persons shall be allowed to drag any seine or set any net, pot or other machine, for the purpose of catching salmon, shad or alewives, or any other ways obstruct said fish in their passage within thirty rods below or twenty rods above the mouth of said stream, in Merrimack River, on penalty of thirteen dollars and thirty-three cents for each offence, and the seine, net, pot or other machine so used, to be forfeited; and the fine or fines aforesaid shall be recovered and applied in the same manner as fines for breaches of the act to which this is an addition.—[February 7, 1803.

AN ACT to regulate the taking of Alewives in the several Streams leading from Ipswich River to Prichard's Pond, in Topsfield.

(Page 48.) SECT. 1. *Be it enacted*, That it shall and may be lawful for the town of Topsfield, annually, at any legal meeting of the inhabitants of the said town, to sell or otherwise dispose of the privilege of taking alewives in the several streams leading from Ipswich River to Prichard's Pond, in said Topsfield, at such times not exceeding three days in a week, and at such places and under such regulations as the said town shall direct; and the emolument arising from said privilege shall be appropriated by the said town to such purposes and uses as the inhabitants thereof shall, from time to time, in town-meeting determine.

SECT. 2. *Be it further enacted*, That if the purchaser or purchasers, manager or managers, or those employed by them, shall presume to take any of the said fish at any other time or place in the said town than shall be by said town determined; and if any other person or persons whatever, except the purchaser or purchasers, manager or managers, of the said privileges, or those employed by them, in either of the streams aforesaid, shall take any alewives, said person or persons so offending shall, for each offence, forfeit and pay a sum not exceeding thirteen dollars nor less than one dollar, at the discretion of the justice before whom the same shall be tried.

SECT. 3. *Be it further enacted*, That the said town of Topsfield shall, at their annual meeting in March or April, choose by ballot a committee, not exceeding seven nor less than three freeholders of said town, who shall be sworn or affirm to the faithful discharge of the duties enjoined upon them by this act; and it shall be the duty of the said committee to remove, or cause to be removed, all obstructions or impediments out of the natural course of said streams or other passage-ways, as they, or the major part of

them, shall judge obstruct and impede the passage of said fish, during the time of their passing up and down in each year; and the said committee, or the major part of them, are empowered to open the natural course of the said streams, by making them wider and deeper, as well as other passage-ways which they may judge necessary for the passage of the said fish. And the said committee, or any two of them, paying a reasonable compensation therefor if demanded, shall have authority, in discharging the duty enjoined upon them by this act, to go on the lands and meadows of any person through which said streams run, or into any building, mill, or other water-works on said streams, without being considered as trespassers; and any person who shall molest or hinder said committee, or either of them, in the execution of the business of his or their office, or shall obstruct any of the aforesaid streams or passage-ways, otherwise than may be allowed by the said committee, or the major part of them, he or they so offending shall forfeit and pay, for every such offence, a sum not exceeding ten dollars nor less than one dollar, at the discretion of the justice before whom the same shall be tried: *provided, nevertheless*, that nothing in this act shall be considered as authorizing the said committee to injure the proprietor of any mill or other water-works further than is necessary in order to give the said fish a good and sufficient passage-way up the said stream.

SECT. 4. *Be it further enacted*, That if the purchaser or purchasers, manager or managers of the said privilege, shall, when in his or their power, neglect or refuse to supply any person or persons with said fish, when green, in any quantity not exceeding one hundred to any one person who may apply therefor, at such rates as shall be determined by the said town, not exceeding twenty-five cents for one hundred of said fish, he or they so offending shall forfeit and pay the sum of one dollar; and if any person or persons shall ask, demand and receive more than twenty-five cents for one hundred of said fish, and in that proportion for a less number, at the place of taking said fish, he or they so offending shall, for each offence, forfeit and pay the sum of one dollar.

SECT. 5. *Be it further enacted*, That it shall be the duty of the said committee to prosecute all breaches of this act, and for any two of them to seize and detain in their custody, any net which may be found in the hands of any person using the same contrary to the true intent and meaning of this act, until the person so offending makes satisfaction for his offence, or is legally acquitted therefrom; and also to seize to the use of the said town, all such fish as they shall suspect to have been taken contrary to the provisions of this act, unless the person or persons in possession thereof can give satisfactory evidence to such committee that said fish were lawfully taken.

SECT. 6. *Be it further enacted*, That all penalties incurred by any breach of this act, shall be recovered by an action on the case before any justice of the peace within and for the county of Essex, allowing an appeal to the court of common pleas for the same county; and all sums of money recovered as forfeited by this act, shall be for the support of the poor of the said town; and no person, by reason of his being one of the said committee, or an inhabitant of the said town, shall thereby be disqualified from being a witness in any prosecution for a breach of this act.

SECT. 7. *Be it further enacted*, That the fish-committee, or the major part of them, are hereby authorized to give liberty to any owner of any grist-

mill standing on either of the aforesaid streams, to close the fish-ways, or either of them, after the first day of June annually, if they, or the major part of them, shall judge said fish have done passing up.

SECT. 8. *Be it further enacted*, That all laws heretofore made, relative to taking alewives in the aforesaid streams in said Topsfield, and relating to closing the fish-ways after the first day of June annually, are hereby repealed.—[February 9, 1803.

AN ACT regulating the Taking the Fish called Alewives, in the several Streams emptying into Merrimack River, in the Town of Haverhill.

(Page 54.) SECT. 1. *Be it enacted*, That it may and shall be lawful for the inhabitants of the said town of Haverhill, from time to time, at their annual meeting in the month of March or April, to choose, by ballot, a committee of freeholders in said town, whose duty it shall be to determine and order by whom and in what place or places the said fish may be taken in the several streams emptying into the Merrimack River, within the town aforesaid; and shall cause a copy of such order, signed by said committee, or any two of them, to be posted up in some public place in said town. And any person who shall violate such order, upon conviction thereof shall forfeit and pay a sum not exceeding five dollars nor less than two dollars: *provided*, the quantity of fish so taken be less than one barrel. But for every barrel of fish so taken contrary to this law, any person convicted thereof shall forfeit and pay the sum of seven dollars, to be recovered before any justice of the peace in the county of Essex before whom the complaint shall be made.

SECT. 2. *Be it further enacted*, That the committee aforesaid, or the major part of them, are hereby authorized and empowered to open such sluice or passage-ways through or round any dams erected, or that shall be erected across said streams, as they shall judge necessary for the free passage of said fish, and to remove lumber and every other obstruction to the free passage of said fish; to erect racks or wooden frames, as they shall judge necessary, in said streams through which said fish pass, they being restricted in such opening and clearing to do the same as little to the damage of the owner or owners as may be; and such passage so opened by the committee aforesaid, shall continue open, if they judge it necessary, from the tenth day of April to the last day of May annually. And if any person or persons shall unlawfully obstruct the passage or passages for said fish, remove or injure any rack or racks that shall be erected by said committee on said streams, such person or persons so offending, upon conviction thereof, shall forfeit and pay a sum not exceeding one hundred dollars nor less than forty dollars, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, That it shall and may be lawful for any of said committee, or their assistants, while in the execution of their office, to go upon the land adjoining to said streams without being considered as trespassers; and any person or persons who shall attempt to hinder or molest said committee, or either of them, in the execution of their office, shall forfeit and pay a sum not exceeding twenty dollars, nor less than ten dollars, to be recovered in any court proper to try the same.

SECT. 4. *Be it further enacted*, That the said committee be and hereby are authorized and directed to distribute, or cause to be distributed, the fish

that may be taken by them, or any person or persons under them, as equally as circumstances will admit, to such persons as apply for the same; and for the fish so supplied, the committee aforesaid, or their agent or agents, shall demand a sum not exceeding twenty-five cents for each hundred of said fish so delivered, excepting of certain poor persons of said town of Haverhill, who in the opinion of the selectmen of said town, are unable to pay for the same, and such persons shall be supplied, gratis, with such quantities, as the said committee shall judge expedient. And the said committee shall on the first town-meeting after the month of May annually, exhibit an account of all the fish disposed of by them, and the balance, if any remains, after paying them a reasonable compensation for their services, shall be paid into the treasury of said town, for the benefit thereof.

SECT. 5. *Be it further enacted*, That the committee so chosen shall, before they enter upon the duties of their office, be sworn faithfully to discharge the duties required of them by said town, agreeable to this act.

SECT. 6. *Be it further enacted*, That any of the inhabitants of said town of Haverhill, not concerned in violating this act, may be admitted as witnesses in any action that may be brought for any penalties aforesaid, they being inhabitants of said town notwithstanding.

SECT. 7. *Be it further enacted*, That no person or persons shall, after passing this act, be allowed to catch salmon, shad or alewives, or drag any seine, or set any net, pot or other machine, for the purpose of taking or catching said fish, or any otherwise obstruct said fish in their passage within thirty rods below, or twenty rods above the mouth of any streams in the town of Haverhill, emptying into Merrimack River, where said fish usually pass up, on penalty of thirteen dollars, to be recovered before any court proper to try the same; and the seine, net, pot, or other machine so used to be forfeited.

SECT. 8. *Be it further enacted*, That the times and manner prescribed for taking said fish in an act passed March 4th, 1790, entitled "An Act to regulate the catching of salmon, shad and alewives, and to prevent obstructions in Merrimack River, and in the other rivers and streams running into the same, within this Commonwealth; and for repealing several acts heretofore made for that purpose," shall be observed as the times and manner for taking said fish in the said streams in the town of Haverhill; and if any person shall take any of said fish at any other time or in any other manner than is prescribed in the act last recited, he shall, for each offence, be subject to such penalty as is provided in the said act for the same offence, to be appropriated in the same manner as the other forfeitures in this act.

SECT. 9. *Be it further enacted*, That if any person is found attempting to take any of said fish at any time or place, otherwise than is provided by this act, or if any of said fish shall be found in the possession of any person, such person or persons shall be deemed to have taken them unlawfully, and shall be subject to the penalties by this act prescribed, unless he or they shall make it appear upon trial that they came by said fish lawfully.

SECT. 10. *Be it further enacted*, That all fines and forfeitures incurred by breach of this act, shall enure, one moiety thereof to him or them who shall complain or make information of the same, and the other moiety to the said town of Haverhill.—[February 9, 1803.

AN ACT to regulate the taking of the Fish called Alewives in Johnston's Brook, so called, emptying into Merrimack River, in the Town of Bradford, and for clearing the passage-way of said fish, from said Merrimack River to Johnston's Pond, and from thence to Little Pond, so called.

(Page 73.) * SECT. 1. *Be it enacted*, That from and after the passing of this act, the said fish may be taken between where the said Johnston's Brook crosses the road, near Benjamin Morse's and Carlton's grist-mill dam, and in no other place in said brook or passage-way from Merrimack River to Little Pond, so called, and on such days only as are allowed by law for catching fish in Merrimack River; and on such of those days, and in such place or places within those limits, as a committee who may be appointed by the town, as is hereinafter provided, may direct.

SECT. 2. *Be it further enacted*, That the inhabitants of the town of Bradford, at their meeting for the choice of town officers in March or April annually, be and they are hereby authorized and empowered to choose by ballot, three or five persons, being freeholders in said town, a committee to oversee the taking of the said fish as aforesaid; which committee shall be sworn to the faithful discharge of their trust, and shall distribute the fish taken by them, or under their direction, as equally as circumstances will admit, to such of the inhabitants of the said town, or other persons, as may apply for the same; and for fish so supplied and delivered, the committee aforesaid shall demand and receive of the person or persons applying therefor payment, at such rate or rates as the inhabitants of said town at their annual meeting in March or April may direct; excepting of such poor persons as shall be named in a list to be annually made out by the selectmen of the town, and who, in the opinion of said selectmen, are unable to pay for the same; which list shall be given to the committee, and the person or persons borne on said list shall be supplied with such quantities of said fish gratis as the committee think expedient; and the committee aforesaid shall have such allowance for their services as the inhabitants of said town, in open town meeting, may determine; and shall annually, in the month of September next after their appointment, exhibit their accounts to the selectmen for settlement, and pay the balance, if any there is, into the town treasury, for the benefit of said town.

SECT. 3. *Be it further enacted*, That the committee to be chosen as aforesaid, or the major part of them, be and they are hereby authorized to clear any obstructions, or open any dam, or the sluice of any mill or other water-works that is or may be erected on or over said brook or passage-way, at the expense of the owner or owners of such dam or sluice-way: *provided*, such owner or owners shall neglect to open the same when thereto required by said committee, or the major part of them, as aforesaid; and the dam or sluice-way so opened shall continue open to such width and depth, and for such length of time (not exceeding sixty days in one year), as said committee, or the major part of them, may think necessary, with the least possible damage to the proprietor or proprietors of such mill or water-works; and if any person or persons shall obstruct the passage-ways allowed or ordered by the said committee, or the major part of them, in any dam or sluice-way, or shall obstruct the passage of the said fish in any other part of said brook or passage-way than is permitted by this act, such person or persons so

offending shall forfeit and pay a sum not exceeding one hundred and fifty dollars, nor less than thirty dollars.

SECT. 4. *Be it further enacted*, That if any person or persons other than the committee, or such person or persons as shall be by them employed, shall take any of said fish in said brook or passage-way, or any part of it, at any time or by any ways or means whatsoever, each person so offending shall forfeit and pay a sum not exceeding seven dollars, nor less than four dollars for each offence.

SECT. 5. *Be it further enacted*, That the committee chosen as aforesaid, or either of them, or any person employed by them, shall have authority, for the purposes aforesaid, to go on the land or meadow of any person through which such brook or passage-way passes, without being considered as trespassers; and any person who shall molest or hinder said committee, or any of them, or any person employed by them, in the execution of their duty, shall be subject to the same penalties as by this act is incurred for placing obstructions on said brook or passage-way.

SECT. 6. *Be it further enacted*, That if the committee or either of them shall detect any person or persons in attempting to take any of said fish, at any time or place, or in any manner otherwise than is allowed by the said committee, or shall find any such fish with any such person or persons, they shall be deemed and considered to have taken such fish unlawfully, and shall be subject to the penalties of this act accordingly, unless such person or persons can make it appear (on trial) that they came by said fish in some other way.

SECT. 7. *Be it further enacted*, That if any minor or servant shall be found taking any of said fish in anywise contrary to this act, or contrary to the rules and regulations of said town of Bradford, or their committee as aforesaid, the parents, guardians or masters of such minors or servants shall be held to pay all fines incurred by them for any breach of this act or the rules and orders of the town aforesaid.

SECT. 8. *Be it further enacted*, That it shall be the duty of the committee of the town, chosen as aforesaid, and of the selectmen, to prosecute for any breach of this act, and all prosecutions on this act shall be brought in the name of the town treasurer for the time being, and all fines or forfeitures recovered thereby shall accrue one moiety to the complainant and the other moiety to the use of the town.

SECT. 9. *Be it further enacted*, That no person shall be considered as disqualified from being a witness on any trial that may be had pursuant to this act, on account of his belonging to the town of Bradford.—[February 12, 1803.]

AN ACT in addition to the several Laws heretofore made for the Preservation of the Fish called Alewives, in Mattapoisset River, in Rochester, in the County of Plymouth, and for regulating the Taking said Fish in said River.

[Previous Acts, 1788, p. 180; 1789, p. 247; 1791, p. 290. Additional Acts, 1810, ch. 60; 1814, ch. 99; 1817, ch. 136.]

(Page 91.) SECT. 1. *Be it enacted*, That if any person shall take any of said fish in said river, or in the brook running out of Little Long Pond, so called, into Snipticit Pond, in said Rochester, excepting the purchaser or purchasers of the exclusive right of taking said fish in said river, according to the laws now in force with regard to said river, and those who are

employed by said purchaser or purchasers of said privilege, shall forfeit and pay fourteen dollars for each offence, to be recovered in the same manner and to the same uses as are already provided in the laws now in force with regard to said river.

SECT. 2. *Be it further enacted*, That if any purchaser of said privilege, or any person employed by such purchaser or purchasers, shall take any of said fish in said river, or in said brook, at any other place or on any other day than the places or days contained in such privilege, such purchaser or person shall for each such offence forfeit and pay the sum of fourteen dollars, to be recovered as aforesaid, for the uses aforesaid.

SECT. 3. *Be it further enacted*, That the owners of dams on said river shall continue their sluice-ways open, when opened by the selectmen, until the twenty-fifth day of May annually, under the same penalty as is provided in said laws for not keeping them open until the twentieth day of May.

SECT. 4. *Be it further enacted*, That the selectmen of the said town of Rochester are hereby authorized to open, in each and every dam in said river, wherever they may think proper, sufficient passages for the young fish to pass down said river; and if any person shall obstruct any such passage so opened as aforesaid, without the consent of the selectmen, shall for each offence forfeit and pay the sum of fourteen dollars, to be recovered as in said law provided for taking fish contrary to law, and for the same use.—[February 16, 1803.

AN ACT to enable the Town of Medford to dispose of the Privilege of Taking Fish called Shad and Alewives, in Mistick River, within the limits of said Town, and to regulate the same.

(Page 98.) SECT. 1. *Be it enacted*, That it shall and may be lawful for the town of Medford, in the county of Middlesex, annually, at any legal meeting of the inhabitants of said town, to sell or otherwise dispose of the privilege of taking fish in Mistick River, within the limits of said town, so far as said town bounds on both sides of said river, at such times only as is already provided by the law to prevent the destruction of shad and alewives in said river; and the emolument arising from said privilege shall be appropriated by said town to such purposes and uses as the inhabitants thereof shall in town meeting from time to time determine.

SECT. 2. *Be it further enacted*, That if the purchaser or purchasers, manager or managers, or those employed by them, shall presume to take any of said fish at any other place in said town than shall be by said town determined, and if any other person or persons whatever, except the purchaser or purchasers, manager or managers of said privilege, or those employed by them, shall presume to take or catch any of the said fish in Mistick River, within the town of Medford, otherwise than may be by said town determined, he or they so offending shall for each offence forfeit and pay a sum not exceeding thirteen dollars nor less than two dollars, at the discretion of the justice before whom the same shall be tried.

SECT. 3. *Be it further enacted*, That the said town of Medford shall, at their annual meeting in March or April, choose a committee, not exceeding seven nor less than three freeholders of said town, who shall be sworn to the faithful discharge of their duty, enjoined upon them by this act, and also the act to prevent the destruction of shad and alewives in Mistick

River, within the towns of Cambridge, Charlestown and Medford; and it shall be the duty of said committee to cause the natural course of said river to be kept open and without obstruction during the whole time said fish pass up or down said river, and remove any such as may be found therein; and the said committee, or any two of them, paying a reasonable compensation therefor, if demanded, shall have authority in discharging the duties enjoined upon them by this act, to go on the lands of any person bounding on said river, without being considered trespassers; and any person who shall molest or hinder said committee, or either of them, in the execution of their duty, he or they so offending shall forfeit and pay for every such offence a sum not exceeding ten dollars nor less than two dollars, at the discretion of the justice before whom the same shall be tried.

SECT. 4. *Be it further enacted*, That it shall be the duty of the said committee to prosecute all breaches of this act, and for any two of them to seize and detain in their custody any net or seine which may be found in the hands of any person using the same contrary to the true intent and meaning of this act, until the person so offending make satisfaction for his offence, or is legally acquitted therefrom; and also to seize, to the use of the town, all such fish as they shall suspect to have been taken contrary to the provisions of this act, unless the person in possession thereof can give satisfactory evidence to such committee that said fish were lawfully taken.

SECT. 5. *Be it further enacted*, That the penalties incurred by any breach of this act shall be recovered by an action on the case, before any justice of the peace within said county, allowing an appeal to the court of common pleas of said county; and all sums of money recovered as forfeited by this act, shall be for the support of the poor of said town; and no person by reason of his being one of the said committee, shall be thereby disqualified from being a witness in any prosecution for a breach of this act.—[February 21, 1803.

AN ACT in addition to an Act entitled an Act to regulate the Alewife Fishery in the Brook running out of Wakepee Pond, into the Sea, in the Indian Plantation called Marshpee, in the County of Barnstable, passed June the thirteenth, A. D. 1801.

(Page 111.) Whereas the provision in the first section of the above recited act, designating the time for the passage-ways to be opened for said fish to pass and repass is found inconvenient: therefore,

SECT. 1. *Be it enacted*, That from and after the passing of this act, the time for the passage-way or ways to be kept open for the said fish to pass and repass through any mill-dam or dams mentioned in said act, shall be from the twentieth day of April to the fifteenth day of June annually, instead from the first day of April to the twenty-fifth of May.

SECT. 2. *Be it further enacted*, That any person or persons who shall take any such fish in the brook aforesaid, without permission from the person or persons that shall be appointed by the said board of overseers, as in said act is provided, shall, for every such offence, forfeit and pay one dollar for every hundred of fish so taken; so in proportion for a greater or lesser quantity; to be recovered and applied in manner provided by the fourth section of the above-recited act; anything in the above-recited act to the contrary notwithstanding.—[February 22, 1803.

1804.

AN ACT to regulate the Taking of Alewives within the Town of Boxford, and for other Purposes therein mentioned.

(Page 365.) SECT. 1. *Be it enacted*, That it shall and may be lawful for the town of Boxford to take alewives within the limits of said town, in the streams leading from Rush Pond, Little Pond, and Johnson's Pond, to Merrimack River, on such days as are allowed by law for taking said fish in Merrimack River and streams emptying into the same; and on such of those days, and in such place or places within their limits, as the town, or a committee who may be appointed as by this act is provided, may direct.

SECT. 2. *Be it further enacted*, That the inhabitants of the town of Boxford, at their meeting for the choice of town officers, in March or April annually, be and they are hereby authorized and empowered to choose, by ballot, not less than three nor more than seven persons, being freeholders in said town, a committee to direct and oversee the taking the said fish as aforesaid; which committee shall be sworn to the faithful discharge of their trust, and shall distribute the fish taken by them or under their direction, as equally as circumstances will admit, to such of the inhabitants of said town or other persons as may apply for the same. And for fish so supplied and delivered, the committee aforesaid shall demand and receive of the person or persons applying therefor, payment at such rate or rates as the inhabitants of said town at their annual meeting in March or April, may direct; excepting of such poor persons which shall be named in a list to be annually made out by the selectmen of the town, and who in the opinion of the selectmen are unable to pay for the same; which list shall be given to the committee, and the person or persons borne on said list shall be supplied with such quantities of said fish gratis, as the committee may consider expedient. And the committee aforesaid shall have such allowance for their services as the inhabitants of said town, in open town meeting may determine; and shall annually, in the month of September next after their appointment, exhibit their accounts to the selectmen for settlement, and pay the balance, if any remains, into the town treasury, for the benefit of said town.

SECT. 3. *Be it further enacted*, That the town of Boxford may erect and keep in repair a dam, sluice and gate-way, in the stream below Rush Pond, and raise the water in said pond six inches above the usual height, from the first day of June to the first day of December annually, or for such part of that time as shall by the committee aforesaid be considered necessary to facilitate the passing of the fish, at the time of their going down the stream to Johnson's Pond. And if any person shall in any way destroy or injure the said dam, sluice and gate-way as aforesaid, or shall open the same so as to draw off the water from said pond, otherwise than shall be done by the committee aforesaid, or by their direction, such person so offending shall forfeit and pay for every such offence a sum not exceeding one hundred and fifty dollars nor less than thirty dollars.

SECT. 4. *Be it further enacted*, That the committee to be chosen as aforesaid, or the major part of them, be and they are hereby authorized to clear any obstructions, and to open the natural course of said streams, by making them wider and deeper, or to open any dam, or the sluice-way of any mill or other water-works, that is or may be erected over said streams or passage-

ways: *provided*, such owner or owners shall neglect to open the same when thereto required by said committee, or the major part of them as aforesaid; and the dam or sluice-way so opened shall continue open to such width and depth, and for such length of time (not exceeding sixty days in one year) as said committee, or the major part of them, may think necessary, with the least possible damage to the proprietor or proprietors of such mill or water-works; and if any person or persons shall obstruct the passage-ways allowed and ordered by said committee, or the major part of them, or shall obstruct the passage of said fish in any other parts of said streams or passage-ways than is permitted by this act, such person or persons so offending shall forfeit and pay a sum not exceeding one hundred and fifty dollars, nor less than thirty dollars.

SECT. 5. *Be it further enacted*, That if any person or persons, other than the committee, or such person or persons as shall be by them employed, shall take any of said fish in said streams or passage-ways, or any part thereof, at any time, or by any way or means whatsoever, each person so offending shall forfeit and pay a sum not exceeding seven dollars, nor less than four dollars for each offence.

SECT. 6. *Be it further enacted*, That the committee chosen as aforesaid, or either of them, or any person employed by them, paying a reasonable compensation therefor, if demanded, shall have authority, for the purposes aforesaid, to go on the land or meadow of any person through which such streams or passage-ways pass, without being considered as trespassers; and any person who shall molest or hinder said committee, or any of them, or any person employed by them, in the execution of their duty, shall be subject to the same penalties as by this act is incurred for placing obstructions on said streams and passage-ways.

SECT. 7. *Be it further enacted*, That if the committee or either of them shall detect any person or persons in attempting to take any of said fish at any time and place, or in any manner, otherwise than is allowed by said committee, or shall find any such fish with any person or persons, they shall be considered and deemed to have taken such fish unlawfully, and shall be subject to the penalties of this act accordingly, unless such person or persons can make it appear, on trial, they came by said fish in some other way.

SECT. 8. *Be it further enacted*, That if any minor or servant shall be found taking any of said fish, in any way contrary to this act, or contrary to the rules and regulations of the said town of Boxford, or their committee as aforesaid, the parents, masters or guardians of such servants or minors shall be held to pay all fines incurred by them for any breach of this act, or the rules and orders of the town aforesaid.

SECT. 9. *Be it further enacted*, That it shall be the duty of the committee of the town, chosen as aforesaid, to prosecute for any breach of this act; and all prosecutions shall be brought in the name of the town treasurer for the time being, by an action on the case, in any court proper to try the same; and all fines or forfeitures recovered thereby shall accrue, one half thereof to the complainant, and the other half to the use of the town; and no person, by reason of his being one of the said committee or an inhabitant of said town, shall thereby be disqualified from being a witness in any prosecution for a breach of this act.—[March 3, 1804.

AN ACT to preserve and regulate the Fishery in the Towns of Rehoboth and Swanzey, in the County of Bristol, and for repealing an Act entitled "An Act to prevent the Destruction of the Fish called Shad and Alewives, in their passage up the Rivers and Streams in the Town of Rehoboth, in the county of Bristol," passed June 27, 1786.

[Additional Acts, 1819, ch. 11; 1820, ch. 51.]

(Page 378.) SECT. 1. *Be it enacted*, That from and after the passing of this act there shall not be any seine or drag-net set or drawn at any time in Palmer's River, in said Rehoboth; and that no seine or drag-net shall be set or drawn in said river within the town of Swanzey, between the first day of April and the twentieth day of June annually, only on Monday, Tuesday and Wednesday, between the rising of the sun and the setting of the same on each of said days.

SECT. 2. *Be it further enacted*, That if any person or persons shall at any time draw or set any seine or drag-net in said Palmer's River, in said town of Rehoboth, or shall draw or set any seine or drag-net in said river in said town of Swanzey, between the first day of April and the twentieth day of June annually, except as abovesaid on Monday, Tuesday and Wednesday, between the rising and setting of the sun on each of said days, he or they so offending shall forfeit and pay a fine of seven dollars for each and every offence.

SECT. 3. *Be it further enacted*, That no fish shall be taken in said river, or in any brook or branch of said river, either in the said town of Rehoboth or Swanzey, with scoop-nets, only on Monday, Tuesday and Wednesday nights, between the setting of the sun and the rising of the same on each day; and that no weirs shall be built in said river, up stream, from the south-west corner of a lot of land on the west side of said river, in said Rehoboth, belonging to Capt. Daniel Davis, adjoining to Capt. Samuel Bullock's land; and that there shall be no driving said river or brooks with poles or otherwise; and that no fish be taken in said Palmer's River, within two rods of the bridge over the same near Philip Miller's, nor within five rods of the place where the brook that runs out of the pond near Richard Perse's enters said river.

SECT. 4. *Be it further enacted*, That no weirs be made in Runins' River, in said Rehoboth, in any year, until after the first day of June; and that no fish be taken in said Runins' River, within one rod of any bridge over said river; and that no fish be taken in said Runins' River, only on Monday, Tuesday, Wednesday and Thursday nights, between the setting of the sun and the rising of the same on each day; and that no fish be taken in said river, north of the south line of Joseph West's land, on said river; and that there be no driving of fish in said river with poles or otherwise.

SECT. 5. *Be it further enacted*, That if any person shall make any wear or take any fish in either of said rivers or brooks, at any other time or in any other place than is allowed by this act, or shall at any time drive the fish in either of said rivers or brooks, with poles or otherwise, each person so offending shall pay a fine not exceeding four dollars nor less than two dollars for each offence.

SECT. 6. *Be it further enacted*, That all the penalties incurred by a breach of this act, may be sued for and recovered before any justice of the peace in the county of Bristol; and all sums so recovered as forfeited by this act,

shall be appropriated, one moiety thereof to the prosecutor and the other moiety for the use of the town in which the forfeiture shall happen.

SECT. 7. *Be it further enacted*, That the aforesaid act, entitled "An Act to prevent the destruction of the fish called shad and alewives in their passage-way up the rivers and streams in the town of Rehoboth, in the county of Bristol," be and it is hereby repealed.—[March 6, 1804.

AN ACT in addition to "An Act to regulate the Alewife Fishery in the Towns of Lynn, Lynnfield and Reading, in the Counties of Essex and Middlesex, and for repealing all Laws heretofore made for that purpose."

[March 3, 1802. Repealed, 1823, ch. 97; 1843, ch. 187; 1852, ch. 48.]

(Page 398.) SECT. 1. *Be it enacted*, That the committees chosen and appointed as required by the fourth section of the act to which this is an addition, shall cause the natural course of the rivers, passage-ways or streams through which the fish mentioned in said act shall or may pass, to be opened in each year on the tenth day of April.

SECT. 2. *Be it further enacted*, That no person or persons, authorized by the act to which this is in addition to take fish in any river, stream or passage-way, as in said act is mentioned, shall take any fish as aforesaid except on Mondays, Tuesdays and Wednesdays in each week; anything in the said act to the contrary notwithstanding.

SECT. 3. *Be it further enacted*, That if any person or persons shall extend any wear or other obstruction across said river, stream or passage-way, or shall extend, fasten and confine any seine across the same, the person or persons so offending shall be subject and liable to, and shall forfeit and pay such sum as is provided in the second section of the act to which this is in addition, to be recovered and appropriated as in said act is described.—[March 8, 1804.

AN ACT in addition to and repealing the fourth Section of an Act entitled "An Act for providing a Passage for Fish from Mystic River to Ell Pond, in the Town of Malden."

[1794, p. 512; 1801, p. 431; 1815, ch. 43. Expired.]

(Page 399.) SECT. 1. *Be it enacted*, That it shall not be lawful to take shad or alewives in Ell Pond, in the town of Malden, or in any part of the stream running therefrom into Mystic River; and any person offending herein shall for each offence forfeit and pay a sum of not more than twenty dollars nor less than five dollars, to be recovered by an action of debt before any court proper to try the same, one half to the use of the town of Malden, the other half to the use of him or them who may sue therefor.

SECT. 2. *Be it further enacted*, That Samuel Tufts, mentioned in the act to which this is in addition, from the fifteenth day of April to the fifteenth day of May annually, shall not draw off the water from the said stream so as to reduce the same below the passage-way mentioned in said act, unless by license from the fish committee appointed by said town of Malden; and if by virtue of such license the said Samuel Tufts, or any other person, shall reduce the water below the said passage-way, the person who shall so reduce the water shall be held to make and keep open some other passage-way for said fish, to the acceptance of the committee aforesaid; and if there shall be at any time more than one mill on the said stream, the owners thereof shall be held to make and keep open during the term aforesaid, a

passage-way by each mill, and the committee shall have power to determine the sufficiency of such passage-way, and also to regulate the time of grinding for each mill, so that the time allowed to all the mills may be equal to thirty days' grinding of one mill from the fifteenth day of April to the fifteenth day of May annually; and any person offending against either of the provisions of this section, shall forfeit and pay not more than twenty dollars nor less than ten dollars, to be recovered by an action of debt before any court proper to try the same, one half to the use of the town of Malden, the other half to him or them who may sue therefor.

SECT. 3. *Be it further enacted*, That the fourth section of the act to which this is in addition be and the same is hereby repealed; and this act is to continue and be in force until the expiration of the said act, and no longer.—[March 9, 1804.

AN ACT for the Preservation and to regulate the Taking of the Fish called Shad and Alewives, in the Stream called Miles River, in Wenham, Hamilton and Ipswich, in the County of Essex.

[1788, p. 191; 1793, p. 451; 1797, p. 128; 1805, p. 524; 1806, p. 1; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22.]

(Page 431.) SECT. 1. *Be it enacted*, That the several towns of Wenham, Hamilton and Ipswich shall, at their annual meeting for the choice of officers, respectively choose annually a committee of three persons in each town, whose duty it shall be, in the months of March or April annually, to sell at public vendue the privilege of taking said fish in such places and in such manner as a majority of the said committee shall agree upon, in said towns of Wenham, Hamilton and Ipswich, in said Miles River, on Mondays, Wednesdays and Fridays in each week, for so long a time in each year as said committee shall agree upon; and said committee, before they enter on the execution of their office, shall be sworn to the faithful and impartial discharge of their duty in the same manner as other town officers are; and the net proceeds of said sale shall be equally divided between the said three towns.

SECT. 2. *Be it further enacted*, That the committee of the town of Wenham the first year, the committee of the town of Hamilton the second year, and the committee of the town of Ipswich the third year, and so on in rotation forever hereafter, shall notify the town clerks of the other towns concerned in said fishing, of the time and place in which said committee shall meet, said notice to be served ten days at least before the time of meeting; at which and all subsequent meetings, the majority present shall have the authority of the whole committees; and said committee shall give due notice in each of said towns, of the time and place, and the sale of said right of catching said fish; and at the vendue shall publish the conditions in writing, expressing the manner of taking as well as the length of time in each year.

SECT. 3. *Be it further enacted*, That all persons, except the purchaser or purchasers, or those employed by them, who shall take any of said fish in said Miles River, to the margin of Wenham Pond, shall pay a sum not exceeding thirteen nor less than five dollars for each offence.

SECT. 4. *Be it further enacted*, That if either of said towns shall neglect to choose their proportion of said committee, as is required by this act, or if such committee, when chosen, whose duty it shall be to notify the

clerks of the other towns of the proposed time for the whole committee to meet as aforesaid, shall neglect to give such notice as aforesaid, the town so neglecting, or whose committee shall so neglect, shall forfeit all right to fishing in said river for the current year.

SECT. 5. *Be it further enacted*, That the owner or occupier of any dam on said river, shall annually, betwixt the tenth day of April and the tenth day of June following, for such term and in such manner as said committees shall direct, open a sufficient sluice-way or passage for said fish; and the owner or occupier of such dam, who shall neglect, after proper notice from said committee, to open or continue open as aforesaid, a sluice-way, shall forfeit and pay a sum not exceeding one hundred dollars, nor less than fifty dollars; and if any person shall make any wear or other obstruction to the passage of said fish, or shall make use of any seine in said river (except as shall be allowed by said committee to any purchaser of the right of taking fish in said river), the person so offending shall forfeit and pay the sum of thirteen dollars.

SECT. 6. *Be it further enacted*, That each of the treasurers of the aforesaid towns, for the time being, are hereby authorized upon the complaint of the committee aforesaid, to sue for any forfeiture incurred by the breach of any of the regulations provided in this act, and also for the breach of such further regulations as may from time to time be provided by the committee aforesaid. And all sums and forfeitures recovered for any breaches aforesaid shall, with the proceeds of said fishing, be equally divided between the aforesaid towns; and the said treasurers, or either of them, recover the said penalties, or any of them, in an action of the case, before any court proper to try the same.

SECT. 7. *Be it further enacted*, That the purchaser or purchasers of the right of taking said fish shall, at all times, deliver to the poor of the several towns aforesaid, such number of fish taken as aforesaid, gratis, as the committee shall order and direct, and shall in all respects conform to such regulations as said committee shall publish in their conditions of sale; and for each offence in breaking said regulations, shall forfeit and pay a sum not more than fifty dollars, nor less than twenty dollars.

SECT. 8. *Be it further enacted*, That the committee chosen as aforesaid, or either of them, or any person employed by them, shall have authority, for the purposes aforesaid, to go on land or meadow of any person through which such river or passage-way passes, without being considered trespassers; and any person who shall molest or hinder said committee, or any of them, or any person employed by them in the execution of their duty, shall be subject to the same penalties as by this act is incurred for placing obstructions on said river.

SECT. 9. *Be it further enacted*, That every part and clause of the several laws, made for regulating the taking of shad and alewives in Ipswich River and the branches thereof, and for preserving the same, shall cease to operate or have any effect on Miles River and Wenham Pond aforesaid.—[March 9, 1804.

AN ACT in addition to an Act entitled "An Act to regulate the Catching Salmon, Shad and Alewives, and to prevent Obstructions in Merrimack River, and in the other Rivers and Streams running into the same; within this Commonwealth; and for repealing several Acts heretofore made for that purpose." *

(Page 441.) SECT. 1. *Be it further enacted*, That as long as there shall be upheld and maintained any mill or mills at the mouth of Stoney Brook, so called, in the town of Chelmsford, in the county of Middlesex, or there shall be erected or kept any dam or dams across the said stream, for the working of such mill or mills, it shall be the duty of the owner or occupant of any such mill, to cause to be made and kept open a sluice or passage-way for fish to pass up and down through the dam in the same part thereof, where the passage-way now is, which sluice so to be kept open, shall not be more than eighteen inches nor less than twelve inches in width, and such owner or occupant shall be holden to keep the passage-way below the dam in good repair, as the same is now constructed.

SECT. 2. *Be it further enacted*, That so long as the owner or occupant of such mill or mills as aforesaid, shall cause to be made and left open a sluice or passage-way through and over such dam as aforesaid, of the form and dimensions aforesaid, for the free passage of fish up and down the said brook, such proprietor or occupant shall not be subject to any prosecution under or by virtue of the act to which this is in addition, nor to any of the forfeitures and penalties therein contained; any law, usage or custom to the contrary notwithstanding.

SECT. 3. *Be it further enacted*, That this act shall continue and be in force for the term of three years from the passing thereof, and no longer.—[March 9, 1804.]

1805.

AN ACT authorizing the Inhabitants of the Town of Newton, in the County of Middlesex, to regulate the taking of Fish called Shad and Alewives within the limits of the said Town.

[1805, ch. 29.]

(Page 494.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall be lawful for the inhabitants of said town of Newton, to sell the right and regulate the times, places and manner of taking said fish within the limits of said town, not exceeding in point of time three days in a week; and the inhabitants of said town, at their annual meeting in March or April, are hereby authorized and empowered to appoint agents, whose duty it shall be to carry into execution the purposes of this act.

SECT. 2. *Be it further enacted*, That the agents aforesaid may, in behalf of said town, and for their use and benefit, sell the right and regulate the times, places and manner of taking said fish within the town aforesaid; and for the proceeds of said sale of right, said agents shall be held to account with and pay to the said inhabitants, from time to time in such manner as they may direct or vote in said meetings in March or April.

SECT. 3. *Be it further enacted*, That the said agents shall forthwith, after establishing such rules and regulations, and determining by whom said fish may be taken, cause a copy thereof, under their hands, to be posted up in two or more public places within the said town; and if any person or per-

sons, other than those to whom said right shall be sold as aforesaid, shall take any of said fish called shad and alewives within the town aforesaid, or if any person or persons to whom said right shall be sold as aforesaid, shall take any of said fish at any other time, in any other place, or in any other manner than shall be expressed in the conditions of the sale to them, such person or persons so offending, shall severally, for each and every offence, forfeit and pay treble the value of said fish so taken, to be recovered in an action on the case, to the use of any person who may sue for the same.—[February 16, 1805.

AN ACT in addition to an Act entitled “An Act to prevent the Destruction of Alewives and other Fish in Ipswich River, and to promote the increase of the same,” passed the twenty-eighth day of March, in the year of our Lord one thousand seven hundred and eighty-eight.

[1805, ch. 29.]

(Page 524.) Whereas the provision in the first section of the act entitled “An Act to prevent the destruction of Alewives and other Fish in Ipswich River, and to promote the increase of the same,” passed the twenty-eighth day of March, in the year of our Lord one thousand seven hundred and eighty-eight, designating the time for the passage-ways to be opened for the fish to pass and repass, is found inconvenient; therefore,

Be it enacted, That from and after the passing of this act, the time for the passage-way or ways to be kept open for said fish to pass and repass through any mill-dam or dams now erected, or hereafter to be erected, on that part of said Ipswich River which is below Flint’s and Meriam’s mills, or any stream or streams running from any natural pond into the same, shall be from the tenth day of April to the third day of June annually; anything in the above-mentioned act to the contrary notwithstanding.—[March 11, 1805.

AN ACT in addition to and for repealing a certain Clause in an Act passed March twenty-eighth, in the year of our Lord one thousand seven hundred and eighty-eight, entitled “An Act to prevent the Destruction of Alewives and other Fish in Ipswich River, and to encourage the increase of the same.”

[1788, p. 191; 1793, p. 451; 1796, p. 128; 1805, p. 524; 1804, p. 431; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22. Additional Acts, 1825, ch. 78; 1829, ch. 40.]

(Ch. 29.) SECT. 1. *Be it enacted*, That the future using and improving of Barnabas Dodge’s saw-mill, standing on Ipswich River, at Warner’s mill-dam, so called, within the towns of Ipswich and Hamilton, from the last day of April to the first day of June annually, shall be under the directions, regulations and restrictions of the major part of the selectmen of the towns of Ipswich, Hamilton, Topsfield, Middleton and Reading, for the time being; such directions, regulations and restrictions being made in writing under the hands of the major part of the selectmen aforesaid, and delivered to the said Dodge from time to time as shall be found necessary.

SECT. 2. *Be it further enacted*, That for every omission or violation of such directions, regulations or restrictions as aforesaid, the said Dodge shall be subject to such penalties and forfeitures as are incurred by an Act entitled “An Act to prevent the Destruction of Alewives and other fish in Ipswich River, and to encourage the increase of the same,” for using and

improving said mill, within the term aforesaid; to be sued for, recovered and applied in manner as is prescribed in the said act.

SECT. 3. *Be it further enacted*, That the sixth clause of the afore-mentioned act, so far as it respects the improving and using the said Dodge's saw-mill, within the term therein mentioned, shall be and hereby is repealed.—[February 11, 1806.

AN ACT authorizing the Inhabitants of the Town of Acton, in the County of Middlesex, to regulate the taking of Fish called Shad and Alewives within the limits of said Town.

(Ch. 43.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall be lawful for the inhabitants of the town of Acton, to sell the right and regulate the time, places and manner of taking shad and alewives within the limits of said town, not exceeding in point of time three days in a week; and the inhabitants of said town, at their annual meeting in March or April, are hereby authorized and empowered to appoint agents, whose duty it shall be to carry into execution the purposes of this act.

SECT. 2. *Be it further enacted*, That the agents aforesaid may, in behalf of said town, and for their use and benefit, sell the right and regulate the times, places and manner of taking said fish within the town aforesaid; and for the proceeds of the sale of said right, said agents shall be held to account with and pay to the said inhabitants, from time to time in such manner as they shall direct by vote in said meetings in March or April.

SECT. 3. *Be it further enacted*, That the said agents shall forthwith, after establishing such rules and regulations, and determining by whom said fish may be taken, cause a copy thereof, under their hands, to be posted up in two or more public places within the said towns; and if any person or persons, other than those to whom said right shall be sold as aforesaid, shall take any of the said fish within the town aforesaid, or if any person or persons to whom said right shall be sold as aforesaid, shall take any of said fish at any other time, in any other place, or in any other manner than shall be expressed in the conditions of the sale to them, such person or persons, so offending, shall severally, and for each and every offence, forfeit and pay treble the value of said fish so taken, to be recovered in an action on the case, to the use of any person who may sue for the same.—[February 25, 1806.

AN ACT to remove and prevent Obstructions to the passage of Shad, Alewives and other fish in Parker River and the Falls River, so called, in the County of Essex, and the Streams and Brooks running into the said Falls River.

[Additional Acts, ch. 91, 1808; ch. 106, 1812.]

(Ch. 76.) SECT. 1. *Be it enacted*, That all the owners or occupants of any mill-dam, or other dam heretofore erected and made, or that shall hereafter be made across the rivers, streams or brooks aforesaid, shall, at their own expense, within six months after the passing of this act, make a sufficient way round or through their respective dams, for the passage of shad, alewives and other fish up into the ponds connected with said rivers; and shall at their own expense keep open such passage-ways, from the fifteenth day of April to the first day of June in every succeeding year; and no owner or occupant of any such mill-dam, shall at any time between the fifteenth day of April and first day of June in every year, draw off the water at his mill in such manner as not to leave the sluice-ways, which shall be made as afore-

said, full of water; and if any such sluice-way be closed or shut within the times aforesaid, the owner or occupant of the dam where such sluice-way is made, and also every such owner or occupant who shall draw off the water at his mill, contrary to the provisions of this act, shall forfeit and pay a sum not exceeding five hundred nor less than one hundred dollars for each offence, to be recovered by indictment before the court of common pleas in and for said county of Essex; one half thereof to the use of the Commonwealth, and the other to the use of the poor of the town where the offence shall be committed.

SECT. 2. And whereas the petitioners for the removal of said obstructions, and the parties interested in the several dams aforesaid have mutually agreed that Aaron Hobart, Esquire, of Abington, be appointed to repair to said dams, at the expense of the said petitioners, and to determine the dimensions and the most proper place in each dam for the passage-ways aforesaid :

Be it further enacted, That the said Aaron Hobart, Esquire, be, and he is hereby appointed to repair to and examine said dams, at the expense of the said petitioners, and there to order and determine the most proper place at each dam for making such passage-ways, the breadth and depth thereof, and the manner in which they shall be made, and to make a return, in writing, on or before the first day of July next, of his doings herein, into the office of the secretary of this Commonwealth, to be there filed and kept with the records of the Commonwealth; and every such passage-way, made and kept conformably to the order and determination of the said Aaron Hobart, to be made as aforesaid, shall be taken and considered as a good and sufficient way for the passage of said fish, according to the provisions of this act.

SECT. 3. *Provided, nevertheless, and be it further enacted*, That if the said Aaron Hobart shall not, on or before the first day of July next, make his order and determination in the premises and return the same as aforesaid, the court of sessions for the county of Essex shall and may at any term thereof, on application of any party interested, cause the place and the dimensions of the passage-ways round or through the several dams aforesaid to be fixed and determined in the manner heretofore provided by law; and in case any new dams shall be hereafter erected and made across any of the rivers, streams or brooks aforesaid, the said court of sessions shall and may in like manner cause the place and dimensions of the passage-ways round or through said new dams to be fixed and determined according to law; and *provided, also*, that this act shall be in force until the first day of May, which will be in the year of our Lord one thousand eight hundred and sixteen, and until the end of the then next session of the general court, and no longer.—[March 3, 1806.

AN ACT to regulate the Taking of the Fish called Shad and Alewives within the limits of the Town of Hingham, and for the effectual securing to the said Town the advantages thereof.

(Ch. 91.) SECT. 1. *Be it enacted*, That the taking and disposing of the said fish called shad and alewives in the town of Hingham shall be under the care and management of a committee of the said town, who shall dispose of said fish in such manner as they shall judge most beneficial to the town, and shall render to the town treasurer an account of the proceeds thereof

on or before the first day of November annually; and the said committee shall have a reasonable allowance for their services, and lay their account thereof before the selectmen of the said town for their allowance and approbation; and the said committee shall consist of five freeholders, chosen by ballot in the month of March or April annually, who shall be sworn or affirmed to the faithful discharge of their duty; and if any person chosen to serve on the said committee, or if chosen shall neglect to take the oath or affirmation for the space of seven days after being legally notified of such choice, he shall forfeit and pay to the use of the said town the sum of ten dollars.

SECT. 2. *Be it further enacted*, That the said committee, or a majority of them, shall have full power and authority to open a sufficient passage-way for said fish from the waters in Ware River, so called, into Accord Pond, so called, and to remove from out of the river, brooks or streams issuing from Accord Pond, any obstructions that may be made to the free passing of the said fish into the said pond, or repassing from the said pond to the sea; and the said committee, or either of them, going on to the land of any person or persons for this purpose, shall not be deemed trespassers; and the said committee, or the major part of them, shall determine the particular places where the said fish shall be taken, and give public notice thereof by posting up one or more notifications in some conspicuous place or places in the said town, on or before the first day of May annually; and the said fish shall not be taken on any other days than Monday, Wednesday and Friday, between the rising and the setting of the sun on the said days, nor by any other instrument than by a scoop or dip-net.

SECT. 3. *Be it further enacted*, That no person shall catch or take any of the said fish in any of the waters issuing from Accord Pond, or in any other streams within the said town, without the leave of the said committee, or the major part of them; and whoever shall presume, at any time hereafter, to take, kill or haul on shore any of the said fish, with seines or drag-nets, in said Ware River, through which the said fish pass into the said pond, or shall with any seine or drag-net, or in any other way obstruct the passage of the said fish to or from the same, or shall with a scoop or dip-net, on any other days than as aforesaid, take any of said fish, or shall obstruct the said committee, or either of them, in the execution of their duty, in all and every such case the offender shall for each offence forfeit and pay a sum not exceeding ten dollars nor less than five dollars; and in case the offence be committed in the night, a sum not exceeding twenty dollars nor less than ten dollars.

SECT. 4. *Be it further enacted*, That it shall be the duty of the said committee to give notice to the treasurer of the said town of Hingham, of all offences committed against this act, which may come to their knowledge; and the said treasurer is hereby vested with full power and authority to sue for and recover, from time to time, all fines and forfeitures incurred by any breach of this act, in any court proper to try the same; and such fines and forfeitures shall be to the use of the said town, saving where any person shall give information of any breach of this act, the informer, upon conviction of the offender, shall be entitled to one-third part of the forfeiture; and no person shall be considered as disqualified from being a witness on any trial that may be had, pursuant to this act, on account of his being an inhabitant of

the said town of Hingham, or of his being one of the committee aforesaid.
—[March 12, 1806.]

1806.

AN ACT in addition to an Act, entitled “ An Act to regulate the Catching Salmon, Shad and Alewives, and to prevent Obstructions in Merrimack River, and in the other Rivers and Streams running into the same, within this Commonwealth; and for repealing several Acts heretofore made for that purpose.”

[Expired three years from passage, 1807, p. 56; 1805, p. 577; 1804, p. 441; 1803, p. 43; 1795, p. 35; 1794, p. 511; 1793, p. 442; 1790, p. 272.]

(Ch. 28.) SECT. 1. *Be it enacted*, That so long as any mill or mills, or mill-dam, shall stand and be kept and maintained across Beaver Brook, in the town of Dracut, at the place where the mills of Joshua Bradley now stand, the owner or occupant of such mill or mills, and mill-dam, shall be required and held to keep open a passage or sluice-way for the fish to pass up and down through the same, which shall not be less than six feet wide, and the waters therein not less than six inches deep; and the owner or occupant of such mill and dam shall be holden to keep the said passage or sluice-way below the dam in good repair.

SECT. 2. *Be it further enacted*, That so long as the owner or occupant of such mill or mills as aforesaid, shall cause to be made and kept in good repair, and left open, such passage or sluice-way through such dam or dams, of the dimensions and depth of water aforesaid, such proprietor or occupant shall not be subject to any prosecution under or by virtue of the act to which this is in addition, nor to any forfeiture or penalty therein contained.

SECT. 3. *And be it further enacted*, That this act shall continue and be in force for the term of three years from the passing thereof, and no longer.—[February 3, 1807.]

AN ACT for the Preservation of the Fish in Massapaug Ponds (so called), in the County of Middlesex.

(Ch. 60.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person whatever, in the night-time, to kill, take, or destroy any fish in the pond called Massapaug Ponds, lying between the towns of Dunstable, Groton and Tyngsborough, or in the streams running into or issuing therefrom, with spears or any implement whatever, which is made use of for the purpose of stabbing or killing the fish in the said ponds or streams.

SECT. 2. *Be it further enacted*, That if any person or persons, from and after the passing of this act, in the night-time, after the setting and before the rising of the sun, with spears, or any other implement which is made use of for the purpose of killing or taking of fish, shall kill, take or destroy any fish in said pond called Massapaug Ponds, or in the streams running into or issuing therefrom, such person shall for each and every fish so taken, killed or destroyed, forfeit and pay the sum of fifty cents, to be recovered before any court proper to try the same by action, in which the whole penalty shall enure to the use of such person as shall first sue for the same.—[February 20, 1807.]

AN ACT for the preservation of the Fish called Alewives, in their passage up the Rivers and Streams leading through the Towns of Salem and Danvers, in the County of Essex, and for the regulating the Taking said Fish in said Streams, and for repealing all Laws heretofore passed for regulating the Fishery in said Rivers and Streams.

[Additional Act, 1814, ch. 129.]

(Ch. 117.) SECT. 1. *Be in enacted*, That the towns of Salem and Danvers shall be and they are hereby respectively empowered and directed, at their annual town-meetings, to choose, by ballot, a number, not exceeding five persons in each town, as a fish committee, whose duty it shall be to see that the laws respecting the passage-ways for said fish be duly observed; and each person so chosen shall take an oath for the faithful discharge of the duties required of him by law; and the committees from each of said towns shall meet together annually, on or before the first day of April, as the person first chosen by the town of Salem shall appoint, to be by him duly notified; and the major part of committees present at such meetings, are hereby authorized and empowered to order the times, not exceeding three days in any one week, and the places where and the manner in which said fish may be taken, within the limits of either of said towns. And the members of the committees aforesaid, shall have joint and concurrent jurisdiction in either of the said towns; and the said committees, or either of them, or the members of either of them, shall have full power to act as such, in either of said towns. And in case either of said towns shall neglect to choose said committee, the town not neglecting shall have all the emoluments arising from the fishery, hereafter mentioned. And the said committees, or either of them, on neglect as aforesaid, shall have power to cause the whole natural course of the streams through which the said fish pass, in both the said towns, to be kept open and without obstruction, to remove such as be found therein, to make the passage-ways of such streams wider or deeper, if they may deem it necessary. And the said committees, or either of them, or any member thereof, shall have authority to go on the land of any person through which such river or stream runs, or on which such land may be bounded, for the purpose aforesaid, without being considered as trespassers; and any person who shall hinder the said committees, or either of the members thereof, in the business and execution of their office, or shall obstruct any passage-way in such river or stream, otherwise than may be allowed by such committee or committees, he or she shall forfeit and pay a sum not exceeding fifty dollars nor less than five dollars.

SECT. 2. *Be it further enacted*, That the said committees, or the major part of them present at any meeting duly notified, being not less than three in number, shall be and they are hereby authorized and empowered to open any dam or sluice-head of any mill erected or that may be erected on or over any such river or stream, at the expense of the owner or owners of such dam or sluice, if such owner or owners shall neglect to open the same when thereto required by said committees, or the major part of them, as aforesaid; and the dam or sluice so opened shall continue open such depth and width as the said committees or the major part of them shall order, from the tenth day of April to the last day of May in every year; and the said committees may (when they shall deem it necessary) order the passage-ways open at an earlier period, not prior to the first day of April. And in case any person or persons shall obstruct the passage-way allowed

or ordered by said committees, or the major part of them, in any dam or sluice, each person so offending shall forfeit and pay a sum not exceeding fifty dollars nor less than ten dollars.

SECT. 3. *Be it further enacted*, That the owner or owners of any tide-mills erected, or that may be hereafter erected, shall (in addition to the regulations before prescribed for mill-dams) keep a sluice-gate hoisted, or passage-way open, of three feet in width and two feet high, three hours before high-water, and to continue open such width and depth until high water, and the bottom of such passage-way so opened shall be as low as the said committee shall direct, on penalty of forfeiting, for each tide when such sluice-gate is not hoisted or said passage-way so opened, a sum not exceeding twenty dollars nor less than five dollars.

SECT. 4. *Be it further enacted*, That the committee appointed as aforesaid are hereby authorized and empowered to lease, or sell at public vendue, or otherwise, the privilege of taking and disposing of said fish, when they shall deem it expedient; and the person or persons purchasing the said privilege, shall pay one moiety thereof to the treasurer of the town of Salem, and the other moiety thereof to the treasurer of the town of Danvers, on or before the last day of September, annually, under the penalty of paying one hundred dollars for the use of the said towns; and no person hiring or purchasing said privilege, shall demand of any person more than at the rate of thirty cents for each hundred of said fish thus sold, on penalty of paying five dollars for each offence; and any person or persons taking any of said fish, not being authorized by the said fish committee, shall pay a fine of not more than ten dollars nor less than one dollar.

SECT. 5. *Be it further enacted*, That when the committees aforesaid, or either of them, or any member thereof, shall detect any person or persons, not authorized by said committee, in attempting to take any of said fish, and shall find such fish with such person or persons, they shall be doomed to have taken said fish, and be subject to the penalties of this act accordingly; and any net or other machine found in any such river or stream for the purpose of taking said fish (not authorized by said committees) shall be forfeited; and no person by reason of his being one of either of the committees aforesaid shall thereby be disqualified from being a witness in any prosecution for a breach of this act.

SECT. 6. *Be it further enacted*, That any justice of the peace in either of the said towns of Salem and Danvers, may hear and determine any complaint under this act, to the amount of thirteen dollars and thirty-three cents, his being an inhabitant of the said town notwithstanding; and in case any minor or minors shall offend against any part of this act and thereby incur any or either of the penalties aforesaid, in all such cases the parent, master or guardian of such minor or minors shall be answerable therefor; and in case of a prosecution of such minor or minors, the action shall be commenced against the parent, master or guardian of such minor or minors, respectively, and judgment rendered accordingly.

SECT. 7. *Be it further enacted*, That all sums recovered as forfeited by this act shall be appropriated, one moiety thereof to the prosecutors, and the other moiety equally divided between the said towns of Salem and Danvers.

SECT. 8. *And be it further enacted*, That all laws heretofore passed, concerning the fishery in the rivers and streams aforesaid, be and the same are

hereby repealed, excepting so far as may relate to any forfeitures or penalties incurred for a breach of those laws.—[February 28, 1807. 1814, ch. 129.

1807.

AN ACT to continue in force an Act for regulating the passage-way for Fish through the Dam at the mouth of Stoney Brook, so called, in the Town of Chelmsford, in the County of Middlesex.

(Ch. 49.) *Be it enacted*, That an act made and passed on the ninth day of March, in the year of our Lord one thousand eight hundred and four, entitled "An Act in addition to an Act entitled An Act to regulate the catching Salmon, Shad and Alewives, and to prevent obstructions in Merrimack River, and in the other rivers and streams running into the same within this Commonwealth; and for repealing several acts heretofore made for that purpose," be and hereby is continued in force for the term of three years from the expiration thereof, any limitation in the same act contained, to the contrary notwithstanding.—[February 13, 1807.

1808.

AN ACT to regulate the Taking of Fish in the Town of Rochester.

(Ch. 64.) SECT. 1. *Be it enacted*, That any person who shall take any of the fish called alewives in the brook leading out of Merry's Pond, so called, in Rochester, into Sippican River, or in the said Sippican River, excepting as is in this act allowed, shall forfeit and pay the sum of ten dollars, to be recovered in an action of debt in any court proper to try the same, by the treasurer of said town, to the use of said town.

SECT. 2. *Be it further enacted*, That the inhabitants of the said town of Rochester, at their annual town meeting in the month of March or April annually, shall choose a committee of not more than six nor less than three inspectors of said brook and stream, who shall be under oath as other town officers, to inspect the same, under the direction of the selectmen of said town for the time being, and whose duty it shall be to give immediate notice to the treasurer of said town of all breaches of this act which has come to their knowledge.

SECT. 3. *Be it further enacted*, That the inhabitants of said town of Rochester, at any town meeting legally warned (having an article in the warrant) for that purpose, may if they think proper, sell the exclusive right to the taking of said fish in said brook, or in said river, for a term not more than one year, to the highest bidder or bidders, to be taken at such times and places and by such means as shall be pointed out in the conditions of sale; and if any such purchaser shall take any of such fish in said river or in said brook, contrary to the terms in the conditions of sale, every such person or persons shall forfeit and pay the sum of twenty-five dollars, to be recovered as aforesaid, for the use aforesaid.

SECT. 4. *Be it further enacted*, That if any person shall make, or erect any wear or other impediments in or across said brook or river, below where said brook empties itself into said river, by which the passage of said fish up said brook or up said river shall be obstructed, each person so offending shall for each and every offence forfeit and pay the sum of fifty dollars, to be recovered as aforesaid for the use aforesaid.—[March 2, 1809.

AN ACT in addition to an Act passed in the year of our Lord one thousand eight hundred and two, entitled "An Act for the Preservation and regulating the Taking the Fish called Alewives, in the Brook running from the West Quiticus Pond to the East Quiticus Pond, near the line between the Towns of Middleborough and Rochester, in the County of Plymouth."

[1802, ch. 65; Vol. 2, p. 516. Repealed 1815, ch. 111. Additional Act, 1862, ch. 202.]

(Ch. 78.) SECT. 1. *Be it enacted*, That from and after the passing this act, the agents appointed by the town of Middleborough and the town of Rochester in pursuance to the act to which this is in addition are respectively authorized to sell the right of taking said fish in said brook on every day in the week, Sundays only excepted, and the purchaser or purchasers shall have the same right to take said fish on each and every day in the week, Sundays excepted, as purchasers had under said act to take them on Tuesdays, Wednesdays and Thursdays; and shall also be holden by all the restrictions and regulations provided in said act.

SECT. 2. *Be it further enacted*, That if any person, living without the limits of the county of Plymouth, shall offend against the provisions of this act, or of the act to which this is in addition, any justice of the peace in the county where such person lives or resides, is hereby authorized to take cognizance of, hear and determine all such offences, in the same manner as if the offence had been committed within the county for which he is a justice of the peace.

SECT. 3. *Be it further enacted*, That all forfeitures incurred by the provisions of this act, shall be recovered in the manner and to the uses specified in the act to which this is in addition.—[March 3, 1809.]

AN ACT in addition to an Act entitled "An Act to prevent and remove Obstructions to the passage of Shad, Alewives and other Fish in Parker River, and the Falls River, so called, in the County of Essex, and the Streams and Brooks running into the said Falls River.

[1805, ch. 76. Additional Act 1812, ch. 106.]

(Ch. 91.) SECT. 1. *Be it enacted*, That no person or persons whatever, be allowed from and after the passing of this act, to catch with dip-nets through the ice any bass, shad, alewives or other fish in Parker River, the Falls River, so called, in the county of Essex, and the streams and brooks running into the said Falls River and in Rowley River; and any person or persons so offending, shall forfeit and pay for each offence a fine, not less than five dollars nor more than twenty dollars, at the discretion of the court before whom trial shall be had, according to the aggravation of the offence.

SECT. 2. *Be it further enacted*, That from and after the passing of this act, no person or persons whatever be allowed to take by seines any bass, shad, alewives or other fish in Parker River, Rowley River, the Falls River, and streams and brooks running into the said Falls River, excepting within that part of Parker River lying more than seventy rods below the falls, by John Lee's manufactory; and any person or persons so offending shall forfeit and pay for each offence, a fine not less than five dollars nor more than twenty dollars, at the discretion of the court before whom trial may be had, according to the aggravation of the offence.

SECT. 3. *Be it further enacted*, That from and after the passing of this act, no person or persons whatever be allowed to catch any bass, shad, ale-

wives or other fish, oftener or more than two days in a week, the days to be Monday and Tuesday, and from sunrise on Monday morning to sunrise on Wednesday morning. And if any person or persons shall catch any bass, shad or alewives in Parker River, the Falls River, and streams and brooks running into Falls River, and in Rowley River, or shall drag any seine or drag-net, or set any net, or use any other machine for the purpose of catching any of the said fish in the said rivers or streams, at any other time or place than by this act is allowed, each and every person so offending shall forfeit and pay, for each offence, a fine not less than five dollars nor more than twenty dollars, at the discretion of the court before whom trial may be had, according to the aggravation of the offence, and the seine, net, pot or other machine shall be forfeited.

SECT. 4. *Be it further enacted*, That from and after the passing of this act no person or persons whatever shall be allowed at any time to catch by seines, nets, pots or any other way, any bass, shad, alewives or other fish, within six rods from said mill-dam, or other dams, or of any sluice or passage-way through or by any mill-dam or other dam that is or may be made across the said rivers or streams, or shall place any obstructions in the said sluice or passage-ways in the said rivers and streams, and each and every person so offending shall for each and every offence forfeit and pay a fine not less than five dollars nor more than twenty dollars, at the discretion of the court before whom trial may be had, according to the aggravation of the offence.

SECT. 5. *Be it further enacted*, That the several towns of Newbury, Rowley and Boxford shall, at their annual meetings for the choice of officers, respectively, choose by ballot a committee of three persons from each town, whose duty it shall be jointly and severally to carry into effect the provisions of this act and the act to which this is in addition; and the said committee, before they enter on the execution of their office, shall be sworn to the faithful and impartial discharge of their duty in the same manner as other town officers are sworn, and when so sworn they shall have power to pursue, and are hereby authorized to pursue and execute the duties of their said offices on any part of the aforesaid rivers and streams within either of the aforesaid towns.

SECT. 6. *Be it further enacted*, That all fines and forfeitures incurred by a breach of this act, may be sued for and recovered in any court proper to try the same, one moiety thereof to him or them who may sue and prosecute for the same, the other moiety to the use of the towns of Newbury, Rowley and Boxford.

SECT. 7. *Be it further enacted*, That the said committee, chosen as aforesaid, shall meet at the lower dam on the Falls River, in Newbury, near John Lee's manufactory, on the third Monday in May annually, at ten o'clock in the forenoon, and shall meet at such other times and places within each year as the committee may find necessary, and at such meetings the majority of the committee present shall have the power of the whole committee.

SECT. 8. *Be it further enacted*, That the said committee, at their meetings in manner aforesaid, are hereby authorized and empowered to order and direct from time to time such alterations as may to them appear necessary in the several sluice or passage-ways provided by the act to which this is in addition; and any owner or occupant of any mill-dam or other dam across

any of the said rivers or streams, who shall neglect to make the alterations in the said sluice or passage-way and cause the same to be kept open and daily supplied with water, as directed by the committee, from the fifteenth day of April to the first day of June annually, after being duly notified by the committee, shall forfeit and pay for each offence the same fine and in the same manner as is provided for a similar offence by the act to which this is in addition.—[March 4, 1809.

AN ACT to alter the Times allowed by Law for Taking Fish in the Mouth of Concord River.

[1790, p. 272. Additional Act, 1835, ch. 89.]

(Chap. 94.) *SECT. 1. Be it enacted*, That from and after the passing of this act it shall and may be lawful to take salmon, shad and alewives in the mouth of Concord River on Monday and Tuesday in each week, from sunrise on Monday morning to sunrise on Tuesday morning, and at no other times : *provided*, that such fish shall be taken within the limits prescribed in and by an act passed on the fourth day of March, one thousand seven hundred and ninety, entitled “An Act to regulate the catching of salmon, shad and alewives, and to prevent obstructions in Merrimack River and the other rivers and streams running into the same, within this Commonwealth, and for repealing several acts heretofore made for that purpose.” And whoever shall take any of the said fish at any other time without the limits aforesaid shall be subject to the same forfeitures and penalties, to be recovered and appropriated in the same manner as in said act is provided for similar breaches thereof.—[March 4, 1809.

1809.

AN ACT to regulate the Fishery in the Towns of Ipswich, Hamilton and Wenham.*

(General Laws, page 451, ch. 57.) *SECT. 1. Be it enacted*, That the owner or owners, occupier or occupiers of mill-dams, across the streams leading from the head of the tide waters in that part of Ipswich called Chebacco, to Chebacco Pond, and the ponds adjacent thereto, or the owner or owners, occupier or occupiers of any mill-dam which may be hereafter erected on the streams aforesaid, be and they are hereby required, henceforward, at their own cost and charge, in proportion to their several interests, to make and keep open a sufficient passage, of such depth and width as the committee shall direct, for the fish called shad and alewives, through their respective dams, from the tenth day of April to the fifteenth day of May, annually, and the privilege and benefit of taking fish in the said streams and ponds shall be free to the inhabitants of the said towns of Ipswich, Hamilton and Wenham, within the limits of their respective towns, on the days and within the limitations prescribed by this act.

SECT. 2. Be it further enacted, That the inhabitants of the towns aforesaid, at their annual town meetings for the choice of town officers, be and they are hereby authorized and directed to appoint three or more discreet persons, in each of said towns, as a fish committee, to oversee the taking the fish agreeably to this act, which committee shall be sworn to the faithful discharge of their trust.

* Repealed February 28, 1811.

SECT. 3. *Be it further enacted*, That if the owner or owners, occupier or occupiers of the dams aforesaid, shall refuse or neglect to open and keep open within the period before mentioned, the passages as aforesaid, such owner or owners shall forfeit and pay the sum of one hundred dollars to the use of the towns as aforesaid, to be recovered by action of debt, in any court proper to try the same.

SECT. 4. *Be it further enacted*, That there shall be two days in each week appropriated for taking of said fish in the said streams and ponds, viz., on Monday and Friday, and no fish shall be taken on any other days than the days prescribed by this act, on the penalty of not more than ten dollars and not less than two dollars, and no person shall be allowed to take said fish with seines or drag-nets, on penalty of thirteen dollars.

SECT. 5. *Be it further enacted*, That any justice of the peace in either of the towns of Ipswich, Hamilton or Wenham, shall have cognizance of any breach of this act, and hear, try and determine any complaints to the amount of thirteen dollars, his being an inhabitant of either of the said towns notwithstanding; and in case any minor or minors shall offend against any part of this act, and thereby incur any of the penalties aforesaid, in all such cases the parent, master or guardian of such minor or minors shall be answerable therefor, and in case a prosecution shall ensue, the action shall be commenced against the parent, master or guardian of such minor or minors, respectively, and judgment rendered accordingly. —[March 1, 1809.

1810.

AN ACT to preserve and regulate the taking or catching of Fish called Smelts, in the Island River, so called, in the South part of the Town of Malden, in the County of Middlesex.

(Ch. 112.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person or persons to draw or set any seine, net or drag-nets in the Island River (so called), between Beacham's Point and a dam in said river, near the island so called, in said town of Malden, from the first day of October to the first day of May, annually; and any person so offending herein, shall, for each offence, forfeit and pay a sum not more than twenty dollars nor less than ten dollars, to be recovered by action of debt before any court proper to try the same, one half to the use of the town and the other half to the use of him or them who may sue therefor. —[February 28, 1811.

AN ACT in addition to an Act entitled "An Act to prevent the destruction of Alewives and other Fish in Ipswich River, and to encourage the increase of the same. [1788, p. 191; 1793, p. 451; 1797, p. 128; 1804, p. 431; 1805, p. 524; 1806, p. 1. Additional Acts, 1812, ch. 127; 1814, ch. 22; 1824, ch. 101.]

(Ch. 117.) SECT. 1. *Be it enacted*, That it shall be lawful for the inhabitants of the towns of Ipswich, Hamilton, Topsfield, Reading, Danvers and Middleton, to take fish with seines or drag-nets in Ipswich River, one day in each week, which day shall be Wednesday, at such place in each town as the fish committees in said towns shall respectively direct, and under such regulations and restrictions as the towns aforesaid shall adopt, anything in the act entitled "An Act to prevent the destruction of alewives and other fish in Ipswich River, and to encourage the increase of the same," to the contrary notwithstanding.—[February 28, 1811.

1811.

AN ACT further regulating the Taking of Fish in Mattapoissett River.

[Previous Acts, 1788, p. 180; 1789, p. 247; 1791, p. 290; 1803, p. 91. Additional Acts, ch. 99, 1814; 1817, ch. 136.]

(Ch. 60.) SECT. 1. *Be it enacted*, That if any person or persons shall take any fish called alewives in Mattapoissett River, in the town of Rochester, in the county of Plymouth, or stretch any seine in said river for the purpose of taking fish at any time hereafter in either of the months March, April or May in any part of Mattapoissett Harbor in said Rochester, to the northward of a line running directly from the most southerly part of Capt. Job Haskell's farm on the westerly side of said harbor, to the most southerly part of Joseph Edwards' land on the easterly side of said harbor, such person or persons so offending shall for each offence forfeit and pay fifty dollars, to be recovered in the same way and to the same uses as forfeitures for taking said fish in the same river are by law to be recovered.

SECT. 2. *Be it further enacted*, That the selectmen of said town are hereby authorized annually to regulate the manner in which the purchasers of the exclusive right of taking said fish in said river shall respectively take them, and if any such purchaser shall not conform to such regulations, such purchaser shall for every such offence forfeit fourteen dollars, to be recovered as aforesaid, for the use or uses aforesaid.

SECT. 3. *Be it further enacted*, That if any person not an inhabitant of the said county of Plymouth, shall take any of said fish in said river contrary to law, he shall be holden to answer for the same before any justice of the peace within and for the county of which such person is an inhabitant, or in which he is resident; and all such justices have hereby given them respectively ample jurisdiction of all such actions which may be brought before them, and fully authorized to hear and try them in the same manner as if the forfeiture had been incurred in the same county, and no fiction of law shall be necessary in the declaration to bring such cause within the jurisdiction of such justice of peace.

SECT. 4. *Be it further enacted*, That in all prosecutions for taking said fish in the said river contrary to law, none of the laws on that subject need to be recited, but the plaintiff may declare generally against the offender for taking the fish called alewives in Mattapoissett River in Rochester, in the county of Plymouth, within a limited time, contrary to the form and effect of the statute in such case made and provided.—[June 24, 1811.]

AN ACT for the relief of the Owners of the North Mill-Dam (so called), at the Lower Falls in Newton.

(Ch. 76.) SECT. 1. *Be it enacted*, That a certain act made and passed in the year of our Lord one thousand seven hundred and forty-one, entitled "An Act in addition to an Act made to prevent the destruction of the fish called alewives and other fish," so far as the same may regard or impose any duty upon the owners or occupants of the North Mill-Dam, which is erected across Charles River from the town of Newton to the town of Needham, at the lower falls, be and the same is duly repealed.

SECT. 2. *Be it further enacted*, That it shall not hereafter be the duty of the owner or occupants of the said mill-dam, or any other dam which may be built or erected across Charles River, between the said towns of New-

ton and Needham at the lower falls aforesaid, in the place where the old dam now stands to make or keep open through any such dam, any sluice or passage-way through any such dam during any part of the year, any other law or usage to the contrary notwithstanding.—[June 25, 1811.

AN ACT to repeal an Act entitled "An Act to regulate the Fisheries in the Towns of Ipswich, Hamilton and Wenham."

(Ch. 111, page 364.) *Be it enacted*, That an act passed the first day of March, eighteen hundred and nine, entitled "An Act to regulate the fishery in the towns of Ipswich, Hamilton and Wenham," be and the same is hereby repealed.—[February 28, 1811.

AN ACT in further addition to an Act entitled "An Act to regulate the Catching of Salmon, Shad and Alewives and to prevent Obstructions in Merrimack River, and in the other Rivers and Streams running into the same, within this Commonwealth, and for repealing several Acts heretofore made for that purpose."

[1807, p. 56; 1805, p. 577; 1804, p. 441; 1803, p. 43; 1795, p. 35; 1794, p. 511; 1793, p. 442; 1790, p. 272; 1812, ch. 84; 1819, chs. 4, 20; 1820, chs. 22, 70; 1822, ch. 75.]

(Ch. 175.) SECT. 1. *Be it enacted*, That any person who shall be convicted of catching any shad, salmon or alewives in Merrimack River, or any river or stream centering to or running into the same, or shall drag any seine or drag-net, or set any net or pot, or use any other machine for the purpose of catching any of the said fish in any of the said rivers or streams within this Commonwealth, at any other time or place other than is allowed by the act to which this is in addition, shall forfeit and pay for each offence, a sum not less than seven dollars nor more than thirty dollars, at the discretion of the court before which trial shall be had, according to the aggravation of the offence, anything in the act to which this is in addition to the contrary notwithstanding.

SECT. 2. *Be it further enacted*, That from and after the passing this act, every town in this Commonwealth bordering on Merrimack River, and in which there are any ponds, rivers or streams centering to or emptying themselves into Merrimack River, where salmon, shad or alewives do or would (if not obstructed) go up to cast their spawn, shall at their annual meeting in the month of March or April, annually, choose by ballot at least six suitable and fit persons as fish-wardens, any law or usage to the contrary notwithstanding.

SECT. 3. *Be it further enacted*, That if any person shall be found in any way aiding or assisting in unlawfully fishing, on conviction thereof he shall be adjudged guilty of a breach of the act to which this is in addition, and shall forfeit and pay the same fine as is provided in this act for actually fishing on unlawful days.

SECT. 4. *And be it further enacted*, That the powers given to fish-wardens in the act to which this is in addition, shall be transferred to the selectmen of the several towns where this law can operate or have force, so far as relates to opening and preventing obstructions in or across the said Merrimack River, or any of the rivers or streams running into the same; and it shall be the duty of the selectmen of the three nearest or next adjoining towns, where any obstructions are or may be formed in or across said rivers or streams, or the major part of such selectmen, to remove or cause to be

removed after twenty-four hours' notice given to the owner, builder or occupier, all obstructions to a free and suitable passage of the said fish up and down the said rivers and streams; and if the owner, builder or occupier of any dam or other obstruction shall refuse or neglect for the space of twenty-four hours after notice given as aforesaid, to remove such dam or obstruction, or such part thereof as the selectmen shall direct, the selectmen shall cause the same to be removed at the expense of the owner, builder or occupier thereof.

SECT. 5. *Be it further enacted*, That all fines and forfeitures incurred by any breach of this act, or the act to which this is in addition, and not exceeding ten dollars, shall enure wholly to the fish-warden complaining; and all fish found taken on unlawful days shall be the property of the fish-warden finding them.—[February 29, 1812.

AN ACT supplementary to "An Act regulating the Taking and Disposing of the Fish called Alewives in the Town of Pembroke."

[1790, p. 269; 1792, p. 326. Repealed, 1814, ch. 128.]

(Ch. 72, page 482.) SECT. 1. *Be it enacted*, That no person or persons shall set, draw or cast any seine, drag or set-net, of any dimensions whatever, in the North River, so called, in the county of Plymouth, except from the sun's rising on Friday morning to the sun's rising on the following morning in each week; and that no seine, drag or set-net shall be set, drawn or cast in said river above what is called and known by the name of the Third Herring Brook, or Smelt Brook, excepting as is excepted in the tenth section of the act to which this is a supplement, on the penalty of sixteen dollars for each offence, to be recovered and appropriated in the manner provided for the recovery and appropriation of fines and forfeitures by the act to which this is a supplement.

SECT. 2. *Be it further enacted*, That the ninth section of the act to which this is a supplement, be and it hereby is repealed.—[June 25, 1811.

1812.

AN ACT in further addition to and amendment of an Act entitled "An Act in addition to an Act passed the fourth day of March, one thousand seven hundred and ninety, entitled 'An Act to regulate the Catching of Salmon, Shad and Alewives, and to prevent Obstructions in Merrimac River, and in the other Streams running into the same, within this Commonwealth,'"

[1789, ch. 51, v. 1, p. 272; 1792, ch. 78, v. 1, p. 442. Additional Acts, 1819, 4, 20; 1820, 22, 70; 1822, 75.]

(Ch. 84.) SECT. 1. That the act aforesaid to which this is in addition, passed the twenty-seventh day of March, seventeen hundred and ninety-three, which prohibits the taking of any fish "within fifty rods below or twenty rods above the mouth of any river or stream in the town of Andover emptying into Merrimac River," be so amended as that any person or persons may hereafter, with the consent of the proprietors of the soil, or having otherwise the right of fishing thereon, draw any seine for the purpose of catching shad and salmon in Merrimac River at any place between fifty and twenty-five rods below the mouth of Shausheen River, and between twenty and ten rods above the mouth of Cocheco Brook, in the town of Andover; anything in the act aforesaid to the contrary notwithstanding.—[February 16, 1813.

AN ACT to regulate the taking of Fish in Connecticut River.

[This Act repealed, 1835, ch. 137.]

(Ch. 103.) SECT. 1. That no person or persons whatever be allowed, from and after the passing of this act, to catch any salmon or shad, or draw any seine for the purpose of catching any salmon or shad, in that part of Connecticut River which passes through this Commonwealth, from the twenty-fifth day of June to the first day of December, annually; and if any person or persons shall catch any salmon or shad in said river, or shall drag any seine or net for the purpose of catching any of the said fish in said river, within this Commonwealth, between the said twenty-fifth day of June and the said first day of December, annually, each and every person so offending shall forfeit and pay for each offence a fine of ten dollars.

SECT. 2. *Be it further enacted*, That if any person or persons, at any time, in the river aforesaid, within this Commonwealth, shall fish with a seine or net exceeding forty-five rods in length, or extend more than one seine or net on the same fishing-ground at one and the same time, he or they shall, for each offence, forfeit and pay a fine of twenty dollars.

SECT. 3. *Be it further enacted*, That all the fines and forfeitures incurred by a breach of this act, shall be recovered in an action of debt before any court of competent jurisdiction, in the county where the offence is committed, and all such fines and forfeitures so recovered, shall enure to the benefit of him or them who shall prosecute for the same.

SECT. 4. *Be it further enacted*, That no action founded on this act shall be sustained, unless the same be commenced within one year from the time in which the offence complained of may be committed.

SECT. 5. *Be it further enacted*, That all seines, nets, boats or other fishing implements, which shall be used in violation of any provision of this act, shall be liable to attachment, and held to respond such damages and costs as may be recovered in any action prosecuted under this act.—[February 26, 1813.]

AN ACT in further addition to an Act entitled "An Act to prevent and remove Obstructions to the passage of Shad, Alewives and other Fish in Parker River and the Falls River, so called, in the County of Essex, and the Streams and Brooks running into the said Falls River."

[1805, ch. 76; 1808, ch. 91. Additional Act, 1837, ch. 195.]

(Ch. 106.) SECT. 1. That from and after the passing of this act, the sluice-ways at each and every dam made for the passage of fish on the Falls River, so called, in the county of Essex, shall, at all times, from the fifteenth day of April to the first day of June, annually, be such that the perpendicular section of the water running in each of the said sluice-ways shall be equal to one hundred and forty-four square inches, and the said sluice-ways shall be made in such form, at such places, and with such convenient passages thereto, in and at the several dams aforesaid, as Dennison Wallace and Nathan Felton, Esquires, of Danvers, in the county of Essex, shall direct. And the mill-holders are hereby obliged to make, at their own expense, the sluice-ways and passages as above directed, if not already made, and keep the same in repair during the continuance of the act to which this is in addition, and shall not be holden to make any other alterations at their

expense during the continuance of the said act; and the said mill-holders shall be liable to the same penalties, to be sued for and recovered in the same manner, for any breaches of the duties enjoined upon them by this act, as are prescribed for the like offences in the act to which this act is in addition.—[February 26, 1813.

AN ACT in addition to the several Acts to prevent the destruction of Alewives and other Fish, in Ipswich River.

[1788, p. 191; 1793, p. 451; 1797, p. 128; 1804, p. 431; 1805, p. 524; 1806, p. 1; 1810, ch. 117. Additional Act, 1814, ch. 22.]

(Ch. 127.) SECT. 1. That from and after the passing of this act, the time for the passage-way or passage-ways to be kept open for the fish to pass or repass through any mill-dam or dams now erected, or to be hereafter erected on the stream running from Humphrey's Pond, so called, into Ipswich River, shall be from the tenth day of May to the tenth day of June, annually, anything in the beforementioned acts to the contrary notwithstanding.

SECT. 2. *Be it further enacted*, That the agent appointed by the Danvers Cotton Factory Company shall always be one of the fish committee provided for in the acts to which this is in addition and amendment.—[February 27, 1813.

AN ACT to preserve and regulate the Eel Fishery in the Town of Chatham.

(Ch. 132.) SECT. 1. That from and after the first day of September next, it shall not be lawful for any person not an inhabitant of the town of Chatham, to take, within the limits of said town, any eels, without a permit, in writing, from the major part of the selectmen of the said town, expressing the name of the person, and the quantity permitted to be taken; and every person so offending shall forfeit and pay for every dozen so taken, the sum of twenty-five cents: *provided, nevertheless*, that the major part of the selectmen, for the time being, shall have power to give permits, in writing, to any person, to take eels in said town of Chatham, at such times and in such quantities as they shall deem reasonable, and express in their permit: *provided, also*, that every inhabitant of said town of Chatham, without such permit, shall have a right to take eels within the limits of said town, for the use of his family.

SECT. 2. *Be it further enacted*, That if any boat, cart, sled, horse or crafts shall be found within the limits of said town of Chatham, and not owned therein, with any eels taken within the limits of said town, without a permit as aforesaid from the selectmen, it shall be lawful for any of the fish-wardens, or for any inhabitant or inhabitants of the town of Chatham, to seize and detain the same, not exceeding twenty-four hours, in order that the same, if need be, may be attached or arrested by due process of law, in that time to answer the said fines and forfeitures, with costs of suit.

SECT. 3. *Be it further enacted*, That all fines and forfeitures which may be incurred thereby, shall enure one-half to him or them who may sue for the same, and the other half to the said town of Chatham; and the same shall be recovered, with legal costs of suit, in an action of debt, before any justice of peace for the county of Barnstable, not interested therein.—[February 27, 1813.

AN ACT in addition to an Act entitled "An Act to incorporate the Proprietors of Fresh Pond Meadows, for the purpose of Draining them."

[1799, ch. 79; v. 2, p. 376. Additional Act, 1813, ch. 64.]

(Ch. 138.) SECT. 1. That the proprietors of Fresh Pond Meadows may erect, at the bridge on the county road between Cambridge and West Cambridge, and, from time to time, keep a gate or machine for the purpose of facilitating the draining the Fresh Pond Meadows, so called, in the towns of Cambridge and West Cambridge: *provided*, that the said gate or machine may be kept open by the selectmen of either of the towns of Cambridge or West Cambridge, from the first day of March to the fifteenth day of June, in each and every year, for the free passage of fish.

SECT. 2. *Be it further enacted*, That if it shall be found that the time aforesaid is not sufficient for the free passage of shad and alewives, that on the application of the selectmen of either of said towns, the court of sessions, for the county of Middlesex, may direct that the said gate or machine shall be kept open for such further time as may be deemed necessary for the preservation of said fish.

SECT. 3. *Be it further enacted*, That if any person shall wilfully destroy, injure or impede the operation of the said gate or machine, the person so offending shall forfeit and pay, for each offence, a sum not exceeding one hundred dollars nor less than twenty dollars, to be recovered before any court proper to try the same, one half to the use of the informer, and the other half to the use of the proprietors of the Fresh Pond Meadows aforesaid.—[February 27, 1813.]

AN ACT to regulate the Fishery in the Town of West Cambridge, and to empower said Town to dispose of the Privilege of taking the Fish called Shad and Alewives within the limits thereof.

(Page 552, General Laws.) SECT. 1. *Be it enacted*, That the said town of West Cambridge shall, at their annual meeting in March or April, choose a committee, not exceeding seven nor less than three freeholders of said town, who shall be sworn to the faithful discharge of the duty enjoined upon them by this act, and also the act to prevent the destruction of the shad and alewives in Mystic River, so called, within the towns of Charlestown, Medford and Cambridge. And it shall be and it is hereby made the duty of the said committee, to cause the natural course of the rivers and streams to be kept open and without obstruction during the whole season the said fish pass up or down said rivers or streams, and to remove any such obstructions as may be found therein. And the said committee, or any two of them, paying or tendering a reasonable sum, if demanded, shall have authority, in discharging the duties enjoined upon them by this act, to go on the lands of any person bounding on said rivers or streams, without being considered trespassers; and any person who shall molest or hinder said committee, or either of them, in the execution of their duty, he or they so offending shall forfeit, for every such offence, a sum not exceeding ten dollars nor less than two dollars, at the discretion of the justice before whom the same shall be tried; and it shall be the duty of the said committee to prosecute all breaches of this act, and for either of them to seize and detain in custody any net or seine found in the rivers or streams contrary to the true intent

and meaning of this act, until the persons so offending make satisfaction for their offence, or is legally acquitted therefrom; and also to seize to the use of the town all such fish as they may suspect have been taken contrary to the provisions of this act, unless the person in possession can give satisfactory evidence to the committee that such fish were lawfully taken.

SECT. 2. *Be it further enacted*, That it shall and may be lawful for the town of West Cambridge, annually, at any legal meeting of the inhabitants of said town, to sell or otherwise dispose of the privilege of taking the fish called shad and alewives in any of the ponds, rivers or streams issuing therefrom, within the limits of said town, so far as said town bounds on both sides of said rivers and streams, at such times only as is already provided by law to prevent the destruction of shad and alewives in Mystic River, so called; and the emoluments arising from the said privilege shall be appropriated by the said town to such purposes as the inhabitants thereof may, in town-meeting, from time to time, determine.

SECT. 3. *Be it further enacted*, That if the purchaser or purchasers, manager or managers, or those employed by them, shall presume to take any of said fish at any other place than the said town shall appoint, and if any other person or persons whatever, except the purchaser or purchasers, manager or managers, of said privilege, or those employed by them, do presume to take any of the said fish in the said ponds, rivers or streams within the town of West Cambridge, otherwise than may be allowed by said town, he or they so offending, shall, for each offence, forfeit and pay a sum not exceeding thirteen dollars nor less than two dollars, at the discretion of the justice before whom the same shall be tried.

SECT. 4. *Be it further enacted*, That the penalties incurred by any breach of this act, shall be recovered by an action on the case, before any justice of the peace within said county of Middlesex, allowing an appeal to the circuit court of common pleas of said county; and all sums of money recovered as forfeited by this act, shall be for the support of the poor of said town; and no person, by reason of his being one of the fish-committee aforesaid, or an inhabitant of the said town, shall be thereby disqualified from being a witness in any prosecution for a breach of this act.—[February 22, 1812.

AN ACT in addition to an Act entitled "An Act to regulate the taking of the Fish called Alewives in Manatiquot River, in the Town of Braintree."

[March 1, 1799, p. 235. This Act repealed, 1817, ch. 151.]

(Page 591.) Whereas by an act passed on the first day of March, one thousand seven hundred and ninety-nine, the town of Braintree were authorized to farm out and dispose of the fish called alewives, and as it appears by representation from said town, that other fish have and do run in the river in said town, which proves injurious to the alewife fish:

SECT. 1. *Be it enacted*, That the taking of all fish which do and may run from the salt water in the aforesaid river in the town of Braintree, excepting eels, smelts, and tom-cod, shall be forever hereafter subject to the same restrictions as the taking of alewife fish is by the act entitled "An Act to regulate the taking of the fish called alewives, in the Manatiquot River, in the town of Braintree."

SECT. 2. *Be it further enacted*, That the selectmen of the town of Brintree, for the time being, shall be the committee to farm out and dispose of the aforesaid fish, agreeably to their best judgment: *provided, nevertheless*, that the fish called alewives shall be disposed of agreeably to the act to which this is in addition, any thing in the act to which this is in addition to the contrary notwithstanding.—[February 28, 1812.]

1813.

AN ACT in addition to an Act entitled "An Act to prevent the destruction and to regulate the catching of the Fish called Alewives, in their passage up the Rivers and Streams in the Town of Harwich in the County of Barnstable."

[1787, ch. 10, v. 1, p. 166. Additional Act, 1813, ch. 115.]

(Ch. 57.) SECT. 1. That the inhabitants of the town of Harwich be and they are hereby authorized and empowered, by their committee, annually chosen in the month of March or April, to dispose of the fish called alewives, as they may think proper.

SECT. 2. *Be it further enacted*, That the committee aforesaid shall pay over to the treasurer of the said town of Harwich, on or before the first day of January, annually, all the net proceeds of the sale of said fish, for the use of said town, and any committee, appointed as aforesaid, that shall neglect or refuse to pay over as aforesaid all the moneys they shall have received as aforesaid, shall forfeit and pay, for each offence, a sum not exceeding two hundred dollars nor less than fifty dollars, to be recovered by their treasurer, for the use of the inhabitants of said town, by action of debt, in any court proper to try the same.—[June 16, 1813.]

AN ACT in addition to an Act entitled "An Act to prevent the destruction and to regulate the catching of the Fish called Alewives, in their passage up the Rivers and Streams in the town of Harwich in the county of Barnstable," passed the fourth day of July, seventeen hundred and eighty-seven; and also of another Act, in addition thereto, passed the sixteenth day of June, eighteen hundred and thirteen.

[1787, ch. 10, v. 1, p. 166; 1813, ch. 57; 1855, ch. 39.]

(Ch. 115.) SECT. 1. That an act, passed the fourth day of July, seventeen hundred and eighty-seven, entitled "An Act to prevent the destruction of the fish called alewives, in their passage up the rivers and streams in the town of Harwich, in the county of Barnstable," and also of another act in addition thereto, passed the sixteenth day of June, eighteen hundred and thirteen, be, and both the said acts are extended to operate, and shall have effect over all the streams in the town of Brewster; and all the regulations, provisions, privileges, limitations and restrictions contained in the said act to which this is in addition, so far as they may be applicable to the intents and purposes of this act, shall be used and exercised, and the benefits thereof enjoyed by the inhabitants of the said town of Brewster, as fully and completely as if the said town of Brewster had not been separated from the said town of Harwich; and this act shall be deemed and taken to be supplementary to the said act before mentioned.—[February 12, 1814.]

AN ACT to regulate the Fishery in Aggawam or Westfield River.

[Additional Act, 1826, ch. 100; 1833, ch. 19.]

(Ch. 147.) SECT. 1. That from and after the passing of this act, any person or persons who shall draw a seine or drag-net within thirty rods of

the lower side of the dam or race-way at White's mills, on Aggawam River, in the town of West Springfield, for the purpose of catching shad, alewives or other fish, shall, for each and every offence, forfeit and pay the sum of five dollars for each time he or they shall so draw said seine, together with the forfeiture of the boat and seine.

SECT. 2. *Be it further enacted*, That if any person or persons shall set any pot, net, weare or hurdell within thirty rods of said dam or race-way, for the purpose of catching fish, of any kind, he or they shall, for each and every offence, severally forfeit and pay the sum of five dollars for every twelve hours said pot, net, weare or hurdell shall be placed in the said river, and so in proportion for a greater or less time.

SECT. 3. *Be it further enacted*, That any person who shall attempt to catch fish with a scoop-net within the aforesaid distance of the lower side of said dam, or in or near the sluice-way made for the passage of fish through said dam, shall, for each and every offence, forfeit and pay the sum of one dollar.

SECT. 4. *Be it further enacted*, That all the fines and forfeitures incurred by a breach of this act, may be recovered in an action on the case before any justice of the peace for the county of Hampden.—[February 22, 1814.

AN ACT to prevent the Destruction of the Fish called Alewives and Shad, in Charles River.

[1815, ch. 56.]

(Ch. 56.) SECT. 1. That from and after the passing of this act, if any person or persons shall place or set any seine or net, or set up, erect or make any weares, or place any other incumbrance whatsoever (mill-dams excepted), in or across Charles River, for the straitening, obstructing or stopping the free passing of the fish called shad and alewives, up and down said river, they shall severally forfeit and pay the sum of fifty dollars for each and every offence; one half of which shall be to the use of the town or towns within whose limits the offence is committed, and the other half to him or them that shall complain or prosecute therefor,—or any town may prosecute by their fish committee.

SECT. 2. *Be it further enacted*, That if any person or persons shall draw any seine or net, to take any of the fish aforesaid within said river, or in any other way take any of said fish, on any other days than Monday, Wednesday and Friday in each week, every person so offending shall forfeit and pay the sum of twenty dollars for each and every offence, to the use as aforesaid; and all forfeitures incurred by any breach of this act may be recovered by information, or by action on the case, before any court proper to try the same.

SECT. 3. *Be it further enacted*, That all parts of any acts relating to the fishery in said river, inconsistent with this act, be and the same are hereby repealed.—[February 28, 1814.

1814.

AN ACT in addition to an Act entitled "An Act to prevent the Destruction of Alewives and other Fish in Ipswich River, and to encourage the increase of the same, passed the twenty-eighth day of March, in the year of our Lord one thousand seven hundred and eighty-eight.

[1787, ch. 58, vol. 1, p. 191; 1792, ch. 88, vol. 1, p. 451; 1796, ch. 66, vol. 2, p. 128; 1804, ch. 90, vol. 3, p. 524; 1810, ch. 117; 1812, ch. 127. All these laws in part repealed 1823, ch. 33. Additional Acts, 1829, ch. 134; 1845, ch. 79.]

(Ch. 22.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person to take any of the fish called shad or alewives, within four rods next below the foot of a sluice-way, nor within two rods of the side of a sluice-way of any mill-dam or dams, now erected, or to be erected hereafter, on that part of said Ipswich River which lies below Flint's or Merriam's Mills (except Burnham's Mills, so called), or any stream or streams running from any natural pond into said river (except Mile's River, so called); and any and every person so offending, shall forfeit and pay a fine of five dollars.

SECT. 2. *Be it further enacted*, That each and every person who, after the passing of this act, shall make any wear, or place any other obstruction in said river, or in the flooms of any mills, for the purpose of hindering or retarding the passage of said fish, shall forfeit and pay for each and every such offence a fine not exceeding twenty dollars nor less than ten dollars.

SECT. 3. *Be it further enacted*, That no person shall be allowed to use any machinery for taking said fish, other than dip or drag nets or seines (nor in any place in the aforesaid river and streams, excepting such places as are appointed and allowed by the fish committee of the respective towns bordering upon said river), nor shall any person take any of said fish with seines or drag-nets in said river and streams, between eight of the clock in the evening and sunrising; and every person who shall offend, in either of the above particulars shall, for each and every such offence, forfeit and pay a sum not exceeding twenty dollars nor less than ten dollars.

SECT. 4. *Be it further enacted*, That all fines and forfeitures which may be incurred by any breach of this act, shall be recovered and disposed of in the same manner as is provided in the act to which this is in addition, and that it shall be the duty of the fish committees in the several towns bordering upon Ipswich River, jointly or severally, to cause this act to be duly observed, and to inform against any person or persons who may offend against the said act.—[June 13, 1814.

AN ACT to authorize the Boston Manufacturing Company to shut the Fish Gate in their Dam across Charles River.

(Ch. 40.) SECT. 1. *Be it enacted*, That the Boston Manufacturing Company have the liberty of closing the fish gate in their dam across Charles River, at their works in Newton and Waltham, being the same mill-dam which formerly was owned and occupied by John Boies; and may keep the same shut forever: *provided*, that said company, their successors and assigns, shall make and continue in good repair, a fish-way over said dam, of the same inclination and width, and admitting the same depth of water, as that now made over the lower dam across said river in Watertown, near

Watertown bridge, and shall keep the same open from the first day of April to the first day of June annually.—[June 14, 1814.

AN ACT for further regulating the Fishery in Mattpoisett River, in the Town of Rochester.

[1788, p. 180; 1789, p. 247; 1791, p. 290; 1803, p. 91; 1810, ch. 60; 1817, ch. 136.]

(Ch. 99.) SECT. 1. *Be it enacted*, That from and after the passing of this act, the inhabitants of the town of Rochester, at any meeting legally warned for that purpose, may prohibit the taking any of the fish called alewives, in Mattpoisett River in said town, for the present year, excepting at one place therein, to be by them appointed in said meeting; and may also, by their vote in such meeting, establish such mode of taking said fish at such place, as they shall think proper.

SECT. 2. *Be it further enacted*, That the said inhabitants, at such meeting, may appoint some person or persons to take said fish in such place for such year (not exceeding three days in a week) for the use of said inhabitants, to be disposed of in such way and manner as they, in such meeting, by vote shall agree upon.

SECT. 3. *Be it further enacted*, That if any person or persons who shall be so appointed, or any person who shall purchase the exclusive right of taking said fish at any place in said river, according to the laws now in force for that purpose, shall not conform to the rules and regulations for them respectively established by said inhabitants, such person or persons shall for each breach of such rules and regulations, forfeit and pay to said inhabitants twenty-five dollars, to be recovered in an action of debt, in any court proper to try the same.—[February 10, 1815.

AN ACT in addition to an Act entitled "An Act empowering the Town of Pembroke to regulate and order the taking and disposing of the Fish called Alewives, within the limits of said Town.

[1790, p. 269; 1792, p. 326; 1811, p. 482. Repeals 1790, p. 269; 1811, p. 482, ch. 72. Additional Acts, 1840, ch. 45; 1848, ch. 116; 1853, ch. 350; 1856, ch. 83.]

(Ch. 128.) SECT. 1. *Be it enacted*, That no person or persons shall set, draw or cast any seine, drag or set net of any dimensions whatever, in the North River, so called, in the county of Plymouth, except from sun's rising to the sun's setting of the Mondays, Wednesdays and Fridays of each week; and that no person or persons shall, on said days, by boats, seines, drag-nets, or by any other mode, in the North River, drive any fish into any seine, set net or other receptacle, by which fish may be taken; and all seines, drag or set nets cast into said river on the days mentioned in this act, shall be restricted from sweeping in said river, further than can be done by confining one end of said seine to the bank of the river aforesaid; and no seine, drag or set net shall be set, drawn or cast into said river, above what is commonly called and known by the name of the Third Herring Brook, or Smelt Brook; and no seine used in said river shall exceed the width of the river where it is used, on the penalty of fifty dollars for each and every offence, to be recovered and appropriated in the manner provided for in the act to which this is in addition.

SECT. 2. *Be it further enacted*, That the act supplementary to an act regulating the taking and disposing of the fish called alewives, in the town of Pembroke, passed June the twenty-fifth, one thousand eight hundred

and eleven, and the ninth section of an act entitled "An Act empowering the town of Pembroke to regulate and order the taking and disposing of the fish called alewives, within the limits of the said town," be and the same are hereby repealed.—[February 25, 1815.

AN ACT for regulating the Fishery in the Towns of Salem and Danvers.

[1806, ch. 117.]

(Ch. 129.) SECT. 1. *Be it enacted*, That all the provisions for the preservation of fish called shad,* and for regulating the taking the same, contained in an act entitled "An Act for the preservation of the fish called alewives, in their passage up the rivers and streams leading through the towns of Salem and Danvers, in the county of Essex, and for regulating the taking said fish in said streams, and for repealing all laws heretofore passed for regulating the fishery in said streams and rivers," shall be and hereby are extended to the fish called shad; and the fish committees of the said towns of Danvers and Salem shall hereafter have the same powers, authority and privileges, and be subject to the same duties for the preservation and taking shad, as they now have and are subject to for the preservation and taking of alewives.

SECT. 2. *Be it further enacted*, That the said fish committees, or either of them, shall be and they are hereby empowered to make and open a sluice-way in the brook running from Spring Pond, so called, and to keep and maintain the same open, and without obstruction, and to shut and close the same up, as they may think expedient, and also to open and clear the passage-ways and streams leading from the said pond, for the purpose of enabling young fish to pass down from the said pond, from the tenth day of April to the last day of November, in every year; and for this purpose the said committees, or either of them, or any member thereof, shall have authority to go on the land of any person through which the said streams run, or on which such land may be bounded, without being considered as trespassers; and any person who shall molest or hinder the said committees, or either of the members thereof, in the execution of this part of their office or shall obstruct the said sluice-way or passages, otherwise than may be allowed by said committee or committees, he or she shall forfeit and pay a sum not exceeding fifty dollars nor less than five dollars, to be recovered and appropriated in the same manner as forfeitures and penalties for the breach of the act entitled "An Act for the preservation of the fish called alewives, in their passage up the rivers and streams leading through the towns of Salem and Danvers, in the county of Essex, and for the regulating the taking said fish in said streams, and for repealing all laws heretofore passed for regulating the fishery in said streams and rivers," are recovered and appropriated: *provided*, that this act shall not give the said committees, or either of them, any new powers and privileges concerning the mills, or the sluice or passage ways at the mills on the said streams, after the first day of June in each year.—[February 27, 1815.

*This provision, though apparently erroneous by inserting "shad" instead of "alewives," is correctly transcribed from the original roll. The petition prayed for the extension to shad of the provisions of the existing law in relation to alewives.

By this inadvertence in drawing and engrossing the bill, the provision itself is rendered wholly inoperative.—ED.

AN ACT to regulate the Fisheries in the Town of Yarmouth.

[1815, ch. 83; 1837, ch. 135; 1849, ch. 37.]

(Ch. 134.) SECT. 1. *Be it enacted*, That from and after the passing of this act, the town of Yarmouth shall be, and hereby are empowered and directed, at their meeting for the choice of town officers, in March or April annually, to choose three or more persons, being freeholders in the said town, to see that this act be duly observed; and each person so chosen shall be sworn faithfully to discharge the duties required of him by this act; and the said committee shall meet together annually, on or before the twentieth day of April, and at such time and place as they, or a majority of them shall appoint; and the major part of the committee present at such meeting are hereby authorized and empowered to order the times, places and manner in which it may be lawful to take any of the fish called herring, alewives, perch and eels in said town; and the said committee, or a majority of them, are hereby fully authorized and empowered to cause the natural course of the streams through which the said fish pass to be kept open and without obstruction; to remove such as may be found therein, and to make the said passage-ways wider or deeper, if they shall judge it necessary; and said committee, or either of them, paying a reasonable consideration therefor, if demanded, shall have authority, for those purposes, to go on the land or meadow of any person through which said stream runs, without being considered as trespassers; and any person who shall molest or hinder the said committee, or either of them, in the execution of the business of his or their office, or shall obstruct any passage-ways in the rivers, streams, coves or ponds in said town, otherwise than may be allowed by the said committee, he or they shall forfeit and pay a fine for every such offence, not exceeding ten dollars nor less than three dollars.

SECT. 2. *Be it further enacted*, That the said committee, or a major part of them present at any meeting duly notified, being not less than three in number, shall be and hereby are authorized and empowered to open, or cause to be opened, any dam, or sluice of any mill, or other dam now erected, or that may be hereafter erected on or over any of the said rivers or streams, between the place where such rivers or streams empty themselves into the sea, at low water, and the pond in which said fish usually cast their spawns, at the expense of the owner or owners of such dam or sluice: *provided*, such owner or owners shall neglect to open the same when thereto required by the said committee, or the major part of them, immediately after being thus required so to do; and the dam or sluice so opened shall continue open every year, to such depth and width, and for such term of time between the first day of April and the thirtieth day of June, as the major part of said committee shall judge necessary; and if any person or persons shall obstruct the said passage-ways allowed or ordered by the said committee, or the major part of them, in any dam or sluice, such persons so offending shall, on conviction before any justice of the peace for the county of Barnstable, pay a fine for every such offence not exceeding ten dollars, nor less than three dollars; and the said committee shall cause every such obstruction to be forthwith removed.

SECT. 3. *Be it further enacted*, That if any person or persons shall take any of the said fish in the rivers, streams, ponds or coves aforesaid, at any

time, in any place, or in manner other than shall be allowed by the said committee as aforesaid, each person so offending, for each and every such offence, shall, on conviction as aforesaid, pay a fine not exceeding four dollars nor less than one dollar, if the quantity of fish so taken is less than one barrel; but if the quantity of fish so taken shall be one barrel or more, such person or persons so offending shall forfeit and pay for each and every barrel of fish so taken, the sum of four dollars.

SECT. 4. *Be it further enacted*, That if the committee aforesaid, or either of them, shall detect any person or persons in attempting to take any of the said fish at any time, or in any place, or in any manner otherwise than is allowed by the said committee, or shall find such fish with such person or persons, such person or persons shall be deemed to have taken the said fish unlawfully, and be subject to the penalties of this act accordingly, unless such person or persons can make it appear, on trial, that they came by the said fish in some other way.

SECT. 5. *Be it further enacted*, That if any vessel, boat or craft shall be found within the limits of any of the rivers, streams, ponds or coves, with any more of said fish than shall be permitted by the committee aforesaid, it shall be the duty of said committee, and they are hereby authorized to seize such vessel, boat or craft, and detain the same, not exceeding forty-eight hours, in order that the same may be attached or arrested by due process of law, and made answerable for said fines and forfeitures, with cost of suit: *provided, however*, that as soon as the owner or master of said vessel, boat or craft shall pay such fines and forfeitures to the treasurer of said town, if he shall pay the same before being sued, such vessel, boat or craft shall be discharged, with the effects therein.

SECT. 6. *Be it further enacted*, That all the forfeitures incurred by virtue of this act, shall be to the use of the said town of Yarmouth, to be recovered by an action on the case, in any court proper to try the same, to be brought by the treasurer thereof.—[February 27, 1815.

AN ACT to regulate the Shad and Alewife Fishery within the Town of Billerica.

[1788, p. 189; 1789, p. 247; 1791, p. 290; 1803, p. 91; 1810, ch. 60; 1814, ch. 99; 1820, ch. 70.]

(Ch. 137.) SECT. 1. *Be it enacted*, That it shall and may be lawful for the inhabitants of the town of Billerica, at a legal meeting in the month of March or April, annually, to choose a committee of three or more discreet persons, to sell, or otherwise dispose of the exclusive right or privilege of taking shad and alewives in Concord River, within the limits of said town, at such time and places, and under such regulations and restrictions, not repugnant to the laws of the Commonwealth, as said committee shall, from year to year, establish and determine; a copy of which shall be posted up at three public places, at least, in the said town; and the emoluments arising from said right or privilege shall be appropriated to such uses and purposes as said inhabitants shall, in legal town meeting, from time to time determine.

SECT. 2. *Be it further enacted*, That if the purchaser or purchasers of said right, or any person by them employed, shall take any of said fish in any other manner, or at any other time or place than said committee shall authorize and allow, or if any person except the said purchaser or purchasers, or those by them employed, shall take any of said fish in said river, within the limits of said town, every person so offending, or who shall be

aiding or abetting therein, shall, for every offence, forfeit and pay a sum, not exceeding thirteen dollars, nor less than seven dollars, to be recovered by action of debt before any justice of the peace within the county of Middlesex; one moiety to him who shall sue for the same, and the other moiety to the use of the said town of Billerica.

SECT. 3. *Be it further enacted*, That said committee shall have power to determine and establish the price which said purchaser or purchasers shall have a right to demand and receive for said fish; and if any such purchaser, or any person acting under their authority, shall refuse to sell said fish, when in their power so to do, at the price which shall be determined as aforesaid, of which notice shall have been given them by said committee, every person so offending shall, for each offence, forfeit and pay a sum not exceeding ten dollars nor less than five dollars, to the person injured, to be recovered as aforesaid: *provided, nevertheless*, that nothing in this act contained shall be construed to take away or impair the authority of any fish-wardens, or any other persons, derived from any existing laws for regulating the taking of fish in said river, except so far as it relates to the appropriation of forfeitures for offences mentioned in the second section of this act.—[February 28, 1815.]

AN ACT to regulate the Shad and Alewife Fishery in the Town of Brighton.

[Additional Act, 1826, ch. 76.]

(Ch. 162.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall be lawful for the inhabitants of the town of Brighton, by their agents, to sell the right and regulate the places and manner of taking the fish called shad and alewives, within the limits of said town, subject, in all things, to an act passed on the twenty-eighth day of February, one thousand eight hundred, entitled "An Act to prevent the destruction of the fish called alewives and shad in Charles River." And the inhabitants of said town, at their annual meetings in March or April, are hereby authorized and empowered to appoint agents, whose duty it shall be to carry into execution the purposes of this act.

SECT. 2. *Be it further enacted*, That the agents aforesaid may, for and in behalf of said town, and to their use and benefit, sell their right, regulate the places and manner of taking said fish within the limits of said town, for one or more years at a time, as the town may direct; and the proceeds arising from such sale said agents shall be held to pay over to the treasurer of said town.

SECT. 3. *Be it further enacted*, That the said agents shall, after establishing such rules and regulations as they may think necessary, and by determining by whom said fish may be taken, cause an attested copy thereof to be posted up in some public place in said town; and if any person or persons other than those to whom said right is sold, or persons employed by them, shall take any of the fish called shad and alewives, within the limits aforesaid, or if any person or persons to whom said right is sold, or those employed by them, shall take any of said fish in any other place or in any other manner than shall be expressed in the conditions of sale, every person so offending shall severally forfeit and pay a sum not exceeding ten dollars nor less than four dollars for each and every offence, to be

recovered in an action on the case, to the use of any person who may sue for the same, or the town may sue by their fish-agents.—[March 1, 1815.

1815.

AN ACT for the regulation of the Fishery, in the Town of Malden.

[1794, page 512. Additional Act, 1815, ch. 54. Additional Act, 1823, ch. 129.]

(Ch. 43.) SECT. 1. *Be it enacted*, That if any person or persons shall take or catch any shad or alewives in any river, stream or pond, within the limits of the town of Malden, in the county of Middlesex, except as hereinafter by this act is provided, each person so offending shall forfeit and pay a sum, not exceeding twenty dollars, nor less than ten dollars for each offence, to be recovered in an action of debt, before any court proper to try the same, in the county of Middlesex, one half thereof to the use of him or them who shall sue for the same, and the other half to the use of the said town of Malden.

SECT. 2. *Be it further enacted*, That from and after the passing of this act, it shall be lawful for any and all the inhabitants of said town of Malden, to catch shad and alewives within the limits of the said town on every Monday, Wednesday and Friday, from sunrising on each of the said days to sunrising on each of the succeeding days, from the first day of March to the tenth day of June annually, at such place or places only as shall have been previously determined by the said town.—[January 27, 1816.

AN ACT for the regulation of the Fishery in Woburn.

[1789, p. 238; 1794, p. 512; 1815, chs. 43, 54. Additional Acts, 1861, ch. 157; 1864, ch. 234.]

(Ch. 54.) SECT. 1. *Be it enacted*, That the act passed on the sixteenth day of February, in the year of our Lord one thousand seven hundred and eighty-nine, entitled "An Act to prevent the destruction of the fish called shad and alewives in Mystick River, so called, within the towns of Cambridge, Charlestown and Medford, and for repealing all laws heretofore made for that purpose," shall extend to the town of Woburn, in the county of Middlesex, and to all the streams running from any of the ponds, or other waters there into Mystick Pond, or Spy Pond, so called, in the same manner to all intents and purposes that it would have extended in case the said town of Woburn and the streams aforesaid had been mentioned and contained in the said act; and that it shall be lawful for any or all the inhabitants of the said town of Woburn to take shad and alewives within the limits of that town, on all such days and times as in and by the act aforesaid are allowed for the inhabitants for the towns of Charlestown and Medford, respectively, to take said fish, and on no other.

SECT. 2. *Be it further enacted*, That the owner or occupant of any dam already built, or which may hereafter be built, in or upon any of the streams aforesaid, shall make and maintain a convenient passage-way for shad and alewives to pass by, through or over such dam, and keep the same constantly open and free for said fish to pass up and down therein, from the fifteenth day of April to the fifteenth day of July, annually; and if the owner or occupant of any such dam shall refuse or neglect to make and build such passage-way, when thereto requested by a majority of the committee, for the preservation of fish in either of the said towns of Charlestown, Medford or Woburn, or shall neglect or refuse to open the same on

the said fifteenth day of April annually, or after the same shall have been so opened, shall shut or obstruct, or permit or suffer the same to be shut or obstructed within the term aforesaid, he shall forfeit and pay for each and every such neglect or offence the sum of twenty dollars.

SECT. 3. *Be it further enacted*, That from and after the passing of this act, the several committees for the preservation of fish, to be annually chosen in the said towns of Woburn, Charlestown and Medford respectively, shall be chosen by ballot, and shall consist of three freeholders, who shall not be interested in any such dam as aforesaid; and any person who shall be duly chosen a member of either of said committees, and shall refuse or neglect to qualify himself, by taking the oath required by law, within seven days next after he shall have been duly notified of such choice, shall forfeit and pay the sum of twenty dollars to the use of the town in which he shall have been so chosen, to be recovered by the treasurer thereof, in an action of debt in any court proper to try the same, in the county of Middlesex; and the said town shall proceed to a new choice; and so, *toties quoties*. And it shall be the duty of each and every member of any such committee to see that the passage-ways aforesaid are made convenient for said fish to pass up and down therein, and that they are kept constantly open at and during all the time required by this act; and to open and clear the same, if any of them shall be found shut or obstructed within the said term; and if the owner or occupant of any such dam, situate as aforesaid, shall neglect or refuse to make and build such passage-way, when thereto requested by a majority of either of the said committees, it shall be lawful for the committee making such request, and they are hereby directed, to make and build the same; and when it shall be completed by said committee, the said owner or occupant shall pay to said committee double the amount of all the expenses incurred or sustained by the said committee in making and building the same, on demand. And the said committee shall have a right to sue for and recover the same of such owner or occupant in an action of the case, in any court proper to try the same, in said county of Middlesex; and each member of either of the committees aforesaid shall have full power and authority to do any act in either of the said towns of Charlestown, Medford and Woburn, which, before the passing of this act, might have been lawfully done by a majority of either of said committees, in the town where such committee was chosen; and shall be entitled to and enjoy all the privileges and protection, when acting as such in either of said towns, which before the passing of this act a majority of either of the said committees were entitled to and enjoyed, when acting within the limits of the town in which they were chosen.

SECT. 4. *Be it further enacted*, That it shall be lawful for the inhabitants of the said town of Woburn, at their annual meeting in March or April, to sell or otherwise dispose of the privilege of taking shad and alewives in the streams aforesaid, so far as the same run wholly within the limits of that town, at such times only as are or may be allowed by law for said inhabitants to fish, and to fix on and determine the place or places where said fish shall be so taken, and appropriate the emoluments arising therefrom to such purpose as the said town shall determine.

SECT. 5. *Be it further enacted*, That if any purchaser or manager of said fishery in said Woburn, shall take or catch any of the said fish at any

other place than the place or places which shall be fixed on and determined by the said town as aforesaid, and if any person other than such purchaser or manager, and those in the employ of such purchaser or manager, when said privilege shall have been disposed of by said town as aforesaid, shall take or catch, or attempt to catch, any of the said fish within the said town of Woburn, each and every person so offending shall forfeit and pay the sum of twenty dollars to the use of said town, to be recovered by the treasurer thereof in an action of debt, in any court proper to try the same in the county of Middlesex.

SECT. 6. *Be it further enacted*, That all forfeitures which may be incurred for a breach of this act, not herein otherwise appropriated, shall be recovered in an action of debt, in the name of any one or more members of either of the committees aforesaid, before any court in the county of Middlesex proper to try the same, to the use of the town where the plaintiff or plaintiffs in such action shall live at the commencement thereof; and on the trial of any such action, any member of either of the said committees shall be a competent witness, notwithstanding said action may have been commenced and prosecuted in the name of such member; and each of the towns aforesaid shall be holden to pay the members of their said committee for all their services and expenses incurred by them respectively in executing the duties required of them by this act.—[February 2, 1816.]

AN ACT to regulate the Shad and Alewife Fishery in the Town of Watertown.

[1813, ch. 183. Act of 1797, ch. 75, p. 224, vol. 2, repealed. Additional Act, 1825, ch. 76.]

(Ch. 56.) SECT. 1. *Be it enacted*, That from and after the passing of this act it shall be lawful for the inhabitants of the town of Watertown, by their agents, to sell the right, and regulate the times, places and manner of taking the fish called shad and alewives within the limits of said town; subject in all respects to an act passed on the twenty-eighth day of February, one thousand eight hundred and fourteen, entitled, "An Act to prevent the destruction of the fish called shad and alewives in Charles River." And it shall be the duty of the selectmen of said town, as soon as may be after the passing of this act and forever after, in the month of January in each year, to appoint, and they are hereby empowered to appoint, two persons as agents, whose duty it shall be to carry into execution the purposes of this act: *provided, however*, that neither of the agents at the time of their appointment shall belong to the board of selectmen.

SECT. 2. *Be it further enacted*, That the agents appointed as aforesaid shall, for and in behalf of the inhabitants of said town, and to their use and benefit, as soon as may be after the first appointment and forever after, in the month of February in each year, sell the right at public vendue, and regulate the time, places and manner of taking the fish called shad and alewives within the limits of said town, after giving seven days' notice of the time and place of such sale; and the proceeds arising from such sale said agents shall be held to pay over to the treasurer of the town aforesaid.

SECT. 3. *Be it further enacted*, That said agents shall make and establish such rules and regulations as they may think necessary to promote the interest of the town, and after determining by whom said fish may be taken they shall cause an attested copy of such rules and regulations, and

the name of the person or persons hiring the right to take the fish aforesaid, to be posted up in some public place in said town; and if any person or persons other than he or they to whom said right is sold, or persons employed by him or them, shall take any of the fish called shad and alewives within the limits of said town, or if any person or persons to whom said right is sold, or those employed by him or them, shall take any of said fish contrary to the rules and regulations made and established by said agents, which rules and regulations shall be made public at the time and place of sale; every person so offending shall severally forfeit and pay a sum not exceeding twenty dollars nor less than five dollars for each and every offence, to be recovered in an action on the case to the use of any person who may sue for the same, or the agents may sue in the name of the inhabitants of the town.

SECT. 4. *Be it further enacted*, That it shall be the duty of the town clerk to attend said agents at the time of sale, and to make a fair record of all such rules and regulations as they shall from time to time make and establish, and the conditions of such sale, with the name of such person or persons as may hire the right aforesaid, in a book to be by him kept for for that purpose, and to post all such rules and regulations as the agents may direct.

SECT. 5. *Be it further enacted*, That an act passed on the second day of March, one thousand seven hundred and eighty-eight, entitled "An Act authorizing the inhabitants of Watertown, Weston and Waltham, in the county of Middlesex, to regulate the taking of the fish called shad and alewives, within the limits of said towns," be and the same is hereby repealed: *provided, nevertheless*, that all questions of the constitutional validity, and all actions now pending, and causes of action that have or may arise under the before described act, shall remain and be the same in any court as they might or would have been had not said act been repealed.—[February 3, 1816.

AN ACT to regulate the Fisheries in the Town of Dennis.

[1814, ch. 134. Additional Acts, 1837, ch. 135; 1849, ch. 37; 1850, ch. 148.]

(Ch. 83.) SECT. 1. *Be it enacted*, That from and after the passing of this act, the town of Dennis shall be and hereby is empowered and directed, at their meeting for the choice of town officers in March or April annually, to choose three or more persons, being freeholders in the said town, to see that this act be duly observed; and each person so chosen shall be sworn faithfully to discharge the duties required of him by this act; and the said committee shall meet together annually on or before the twentieth day of April, on such time as they or a majority of them shall appoint, and the major part of them present at such a meeting are hereby authorized and empowered to order the times, places and manner in which it may be lawful to take any of the fish called herring, alewives, perch and eels in said town; and the said committee, or a majority of them, are hereby fully authorized and empowered to cause the natural course of the streams through which said fish pass, to be kept open and without obstruction, to remove such as may be found therein, and to make the said passage-ways wider or deeper if they shall judge it necessary; and said committee, or either of them, paying a reasonable consideration therefor, if demanded, shall have authority for

those purposes to go on the land or meadow of any person through which said streams run, without being considered as trespassers; and any person who shall molest or hinder the said committee, or either of them, in the execution of the business of his or their office, or shall obstruct any passage-way in the river, streams, coves or ponds in said town otherwise than may be allowed by said committee, he or they shall forfeit and pay a fine for every such offence not exceeding ten dollars nor less than three dollars.

SECT. 2. *Be it further enacted*, That if any person or persons shall take any of the said fish in the rivers, streams, ponds or coves aforesaid, at any time, in any place or in any manner other than shall be allowed by the said committee as aforesaid, each person so offending, for each and every such offence shall, on conviction thereof, pay a fine not exceeding four dollars nor less than one dollar, if the quantity of fish so taken is less than one barrel, but if the quantity of fish so taken be one barrel or more, such person or persons so offending shall forfeit and pay for each and every barrel of fish so taken the sum of four dollars.

SECT. 3. *Be it further enacted*, That if the committee aforesaid, or either of them, shall detect any person or persons in attempting to take any of the said fish, at any time or in any place, or in any manner otherwise than is allowed by the said committee, or shall find such fish with such person or persons, such person or persons shall be deemed to have taken the said fish unlawfully, and shall be subject to the penalties of this act accordingly, unless such person or persons can make it appear on trial that they came to the said fish in some other way.

SECT. 4. *Be it further enacted*, That if any vessel, boat or craft shall be found within the limits of any of the rivers, streams, ponds or coves, with any more of said fish than shall be permitted by the committee aforesaid, it shall be the duty of said committee, and they are hereby authorized to seize such vessel, boat or craft, and detain the same, not exceeding forty-eight hours, in order that the same may be attached or arrested by due process of law, and made answerable for said fines and forfeitures, with cost of suit: *provided, however*, that as soon as the owner or master of said vessel, boat or craft shall pay such fines and forfeitures to the treasurer of said town, if he shall pay the same before being sued, such vessel, boat or craft shall be discharged, with the effects therein.

SECT. 5. *Be it further enacted*, That all the forfeitures incurred by virtue of this act, shall be to the use of the said town of Dennis, to be recovered by an action on the case in any court proper to try the same, to be brought by the treasurer thereof.—[February 10, 1816.]

AN ACT to regulate the Fishery within the Town of Middleborough in the County of Plymouth.

[Altered by 1819, ch. 137. Repeals all previous laws except one passed March 6, 1802.]

(Ch. 111.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person or persons (except as is hereinafter provided) to catch or destroy any of the fish called alewives, within the limits of the town of Middleborough, or in Titicut River, so called, either within the limits of the towns of Bridgewater, Middleborough or Raynham: *provided, however*, that it shall and may be lawful for the inhabitants of said town of Middleborough to catch said fish with scoop-nets or set nets only, at

the following places in said Middleborough, to wit: at Oliver's works, so called, three days in each week only, to wit: on Mondays, Tuesdays and Wednesdays, beginning at midnight next succeeding Sunday, and ending at midnight next succeeding Wednesday; at the Old Stone Ware four days in each week, to wit: on Tuesday, Wednesday, Thursday and Friday, beginning at midnight next preceding Tuesday, and ending at midnight next succeeding Friday; and at Assawampset Brook three days in each week, to wit: Monday, Tuesday and Wednesday, beginning at midnight next succeeding Sunday, and ending at midnight next succeeding Wednesday: *provided, also*, that the said town of Middleborough shall, at a legal town meeting, dispose of and grant, upon such conditions and under such restrictions and regulations as said town shall establish for that year, and so from year to year, the sole privilege of catching alewives, with scoop-nets or set nets only, on the days and at the places designated by this act, to such person or persons as shall give most for the same and give sufficient security for payment, such person or persons so purchasing to have the right to take fish, and no other person whatever.

SECT. 2. *Be it further enacted*, That if any person or persons shall, at any time or place other than those admitted by this act, catch or destroy any of the fish aforesaid, or by any other means whatever shall interrupt, impede or hinder the passage of said fish up the streams, brooks or ponds within said town, or in Titicut River which divides said town of Middleborough from the towns of Bridgewater and Raynham, or any of the waters connected therewith within the limits of either of said towns, he or they shall forfeit and pay a sum not exceeding twenty dollars nor less than five dollars, to be recovered by indictment, complaint, or action of debt, in any court proper to try the same; one half to the use of the said town of Middleborough, the other half to him who shall prosecute or sue for the same.

SECT. 3. *Be it further enacted*, That if any person or persons be found fishing with any seine or net, or other machine and instrument, or any seine or other instrument which shall be used by any person or persons contrary to the true intent and meaning of this act, it shall be lawful for any person to seize and take such seine, net or other instrument, to his own use; and, if prosecuted therefor, to plead the general issue and give this act in evidence, as though the same had been specially pleaded.

SECT. 4. *Be it further enacted*, That said town of Middleborough shall, at the annual meeting in the month of March or April in each year, choose four or more persons, being freeholders in said town, whose duty it shall be to see that this act be duly observed, and to prosecute for all breaches thereof; and each person so chosen, shall be sworn to the faithful discharge of his duty. And if any person so chosen shall refuse to serve, he shall forfeit and pay to the use of said town of Middleborough, the sum of five dollars, to be sued for and recovered by the town clerk of said town; and said town shall immediately proceed to a new choice.

SECT. 5. *Be it further enacted*, That all laws heretofore made for the regulation of the fishery in the said town of Middleborough be and the same hereby are repealed: *provided, nevertheless*, that an act passed on the sixth day of March, in the year of our Lord one thousand eight hundred and two, for the preservation and regulating of the taking of the fish called alewives,

in the brook running from the West Quiticus Pond, to the East Quiticus Pond, shall be and remain in full force; anything in this act to the contrary notwithstanding.

SECT. 6. *Be it further enacted*, That any justice of the peace for the county of Plymouth shall be deemed and considered competent to try any action, complaint, or suit, prosecuted under this act, notwithstanding said justice may be an inhabitant of the said town of Middleborough. [February 14, 1816. See 1819, ch. 137.]

AN ACT to regulate the Fishery in Taunton Great River.

[Repealed 1819, ch. 106 (except as to Middleborough). Additional Act, 1832, ch. 44.]

(Ch. 119.) SECT. 1. *Be it enacted*, That from and after the twentieth day of March next, it shall not be lawful for any person or persons (except as hereinafter provided) to catch alewives or any other fish with seines or nets in Taunton Great River: *provided*, that it shall and may be lawful for the inhabitants of the several towns situated on said river, to catch alewives and other fish within the bounds of their own towns and nowhere else, with seines or nets, four days in each week only, to wit, on Monday, Tuesday, Wednesday and Thursday, beginning at midnight next succeeding Sunday and ending at midnight next succeeding Thursday in each week; and *provided*, that the towns of Dighton and Wellington shall draw or sweep with two seines or nets only; the town of Berkley shall draw or sweep with two seines or nets only; the town of Taunton shall draw or sweep with three seines or nets only; the town of Raynham shall draw or sweep with three seines or nets only, in said river, within the time before mentioned; and no person shall be permitted at any time to set any seine or net across said river, or in any part thereof, or in any waters connected with the said river, or make use of any seine or net of more than twenty rods in length: *provided, also*, that each of said towns shall at a legal town meeting, establish annually the places where the said seines or nets may be used within the bounds of the respective towns exclusively, and at the same meeting or an adjournment thereof, dispose of and grant for that year, and so from year to year, the sole privilege of catching alewives, or other fish with seines or nets on the days above mentioned, at the places so established, to such person or persons as shall give the most for the same, and give sufficient security for the payment at such time and in such manner as the respective towns shall order such person or persons, so purchasing the privilege to have right to fish, and no other person whatever.

SECT. 2. *Be it further enacted*, That if any person or persons shall draw any seine or net on any day or time other than those before mentioned, or at any place other than those established by the town as aforesaid, or shall on any day or at any place, set a seine or net in or across said river, or any part thereof, or in any waters connected with the same, he shall forfeit and pay fifty dollars for each and every such offence, to be recovered by indictment or information, or by action of debt, in any court proper to try the same; the one half thereof to the use of the poor of the town where offence shall be committed, and the other half to him or them who shall prosecute or sue for the same.

SECT. 4. *Be it further enacted*, That if any person or persons shall be found sweeping with any seine or net, or if any seine or net shall be used

by any person or persons contrary to the true intent and meaning of this act, it shall and may be lawful for any person or persons to seize and take such seine or net to his or their own use, and if prosecuted therefor, to plead the general issue, and give this act in evidence as though the same was specially pleaded.

SECT. 4. *Be it further enacted*, That the several towns aforesaid shall, at their annual meetings in the month of March or April in each year, choose three or more persons, being freeholders in their respective towns, whose duty shall be to see that this act be duly observed, and to prosecute for all breaches thereof; and each person so chosen shall be sworn to the faithful discharge of his duty; and the several towns shall be holden to make a reasonable compensation to the person so chosen by them respectively for all necessary services in discharge of their duty under this act. And if any person so chosen shall refuse to serve, he shall forfeit and pay to the use of the town to which he belongs the sum of ten dollars, to be sued for and recovered by the town clerk; and the said town shall immediately proceed to a new choice.

SECT. 5. *Be it further enacted*, That if any person or persons convicted of any of the offences aforesaid, by indictment or information, shall fail to pay the costs, or any part thereof, of the process on which he or they shall be convicted, so that the county in which the conviction takes place shall be chargeable with such costs, the several towns aforesaid shall reimburse to the said county the same costs in the following proportions, to wit: the town of Taunton three seventh parts, and the towns of Dighton and Wellington, two seventh parts, and the town of Berkley two seventh parts thereof, to be apportioned and charged by the county treasurer to the said towns respectively, and to be assessed by the assessors of the said town with other town charges.

SECT. 6. *Be it further enacted*, That all laws heretofore made for the regulation of the fishery in Taunton Great River be and the same is hereby repealed.—[February 15, 1816.

1816.

AN ACT to prevent the Taking of Fish in a Pond called Winchel's Pond in Egremont, in the County of Berkshire.

(Ch. 30.) SECT. 1. *Be it enacted*, That from and after the passing of this act no person or persons shall be allowed to put or draw any seine or seines, or put or set any net or nets whatsoever in the pond called Winchel's Pond, in the town of Egremont, in the county of Berkshire, for the taking of the fish called pickerel; and any and every person who shall presume to take any fish called pickerel with any seine or net from said pond, shall incur and pay a penalty of ten dollars for every such offence, and the seine or net shall be forfeited to the said town of Egremont, as also all the fish so taken, to be at the disposal of the selectmen of said town.

SECT. 2. *Be it further enacted*, That no person or persons shall be allowed to take from said pond, in any way whatsoever, any of the said fish called pickerel, within said year, and shall incur and pay a penalty of five dollars for every such offence.

SECT. 3. *Be it further enacted*, That all penalties incurred by any offence against this act may be sued for and recovered in an action of debt by the

treasurer of the said town of Egremont, for the time being, before any justice of the peace in the said county of Berkshire, who does not belong to the said town of Egremont; and all sums of money so recovered shall be appropriated to the use of said town. And in case any minor or minors shall offend against this act, or any part thereof, and thereby incur any of the penalties aforesaid, the parent, master or guardian of such minor or minors shall be answerable therefor; in which cases the action shall be commenced against such parent, master or guardian (as the case may be) of such minor or minors respectively, and judgment rendered accordingly in the same manner and degree as for his or their personal offence.—[June 19, 1816.

AN ACT for regulating the Fishery in the Town of Gloucester.

Whereas the town of Gloucester, in the county of Essex, have purchased of Zacariah Stevens, Esq., and opened a passage-way through his mill-dam for the fish called alewives, into the Cape Pond, so called, and conveyed into it a number of said fish, at a considerable expense, whereby a great increase has arisen :

(Ch. 114.) SECT. 1. *Be it enacted*, That the taking and disposing of the fish called alewives shall be under the care and management of a committee of said town, to consist of five persons, to be chosen at the annual town meeting in March or April, who shall be sworn to the faithful discharge of their duty, and shall distribute the fish that may be taken by them, or any person or persons under them, as equally as circumstances will admit, to such persons as shall apply for the same; and for the fish so supplied, the committee aforesaid shall demand a sum not exceeding fifty cents for each hundred of fish so delivered, and account with the treasurer of said town for the proceeds thereof weekly, and settle their final account on or before the last day of September annually; and the money arising therefrom shall be paid over to the treasurer of said town and appropriated to the use of the said town; and the said committee shall have a reasonable allowance for their services, and lay their accounts before the selectmen of said town for approbation and allowance on or before the last day of November annually.

SECT. 2. *Be it further enacted*, That the said committee, or either of them, shall have full power and authority to remove from or out of the rivers, brooks or streams leading to the said pond, any obstructions that may be made to the free passing of said fish into the said ponds, or repassing from thence into the sea; and the said committee, or either of them, or of such person or persons as shall be employed by them, going on the land of any person or persons for this purpose, shall not be deemed or held guilty of trespass. And the said committee, or the major part of them, shall determine the particular places where the said fish shall be taken, and give public notice thereof by posting up one or more notifications in some conspicuous place or places in said town, on or before the first day of May annually: *provided, however*, that the said fish shall not be taken any more than three days in each week, at the discretion of the committee, and only between the rising and the setting of the sun on said days; and *provided, also*, that the said committee, or any other person under them, shall not be authorized to appoint any such place for fishing on the lands of John Manning, Esq., without his consent.

SECT. 3. *Be it further enacted*, That no person shall catch or take any of said fish in any river, brook or stream leading to or from the said pond, without the direction of the said committee, or the major part of them, in writing; and whoever shall presume, at any time hereafter to take, kill or haul on shore any of the said fish with seines or drag-nets, in either of the rivers, ponds, brooks or streams through which the said fish pass into the said Cape Pond, or shall with any seine or drag-net, or in any other way obstruct the passage of the said fish to or from the said pond, or shall obstruct the said committee, or either of them (or those persons employed by them) in the execution of their duty; in all and every of these cases the offenders shall for each offence forfeit and pay a sum not exceeding twenty dollars nor less than five dollars, with costs of suit.

SECT. 4. *Be it further enacted*, That it shall be the duty of the said committee, or either of them, and they are hereby vested with full power and authority to sue for and recover, in the name of the treasurer of the said town, from time to time, all forfeitures incurred by any breach of this act, before any justice of the peace for the county of Essex; and any justice of the peace of the town of Gloucester may hear and determine any complaint under this act to the amount of twenty dollars, his being an inhabitant of the said town notwithstanding. And in case any minor or minors shall offend against any part of this act, and thereby incur any or either of the penalties aforesaid, in all such cases the parent, master or guardian of such minor or minors shall be answerable therefor; and in case of prosecution of such minor or minors, the action shall be commenced against such parent, master or guardian of such minor or minors respectively, and judgment rendered accordingly; and all such fines shall be to the use of said town; saving where any person shall give information of any breach of this act, the informer, upon conviction of the offender, shall be entitled to one half the forfeiture; and no person shall be considered as being disqualified from being a witness on any trial that may be had pursuant to this act on account of his being an inhabitant of the said town of Gloucester, or of his being one of the committee aforesaid.

SECT. 5. *Be it further enacted*, That it shall be the duty of the committee aforesaid to take care that a sufficient passage be kept open annually for the young alewives to pass from the said pond to the sea.—[December 14, 1816.

1817.

AN ACT to prevent the Destruction of Pickerel in the Town of Great Barrington.

(Ch. 109.) SECT. 1. *Be it enacted*, That from and after the passing of this act, whoever shall kill, take or catch any pickerel in any pond, cove, river or stream within the town of Great Barrington, other than by or with a hook or hooks and line, shall forfeit and pay the sum of five dollars for each and every pickerel so taken, to be recovered by any person who may sue for the same, to his own use, before any justice of the peace within the same county.—[February 13, 1818.

AN ACT for the Preservation of the Fish called Alewives in Mattapoissett River.

[1788, p. 180; 1789, p. 247; 1791, p. 290; 1803, p. 91; 1810, ch. 60; 1814, ch. 99; 1820, ch. 70; 1829, ch. 41.]

(Ch. 136.) SECT. 1. *Be it enacted*, That from and after the passing of this act, any person or persons who shall aid, assist or abet in the unlawful

taking of any of the fish called alewives in Mattapoissett River, in Rochester, shall incur and be liable to the same forfeiture or forfeitures as the person or persons actually taking said fish, to be recovered in the same manner.—[February 19, 1818.

AN ACT to regulate the Fishery in Monatiquot River, in the Town of Braintree.

[Repeals laws made, 1799, p. 235; 1812, p. 154. Additional Act, 1840, ch. 37.]

(Ch. 151.) SECT. 1. *Be it enacted*, That the inhabitants of the town of Braintree, at their meeting in March or April annually, may and they hereby are authorized to regulate the taking of the fish called alewives, shad and smelts in Monatiquot River, within said town, or to dispose of the privilege of taking the same, to their own use and benefit, in any manner or way that they may think proper, which sale shall not exceed three years at one time; and said regulations when made shall remain in force one year next ensuing, and afterwards until new regulations, in manner aforesaid, shall be adopted by the town. And it shall be the duty of said town, at their aforesaid meeting annually, to choose three discreet persons by ballot, whose duty it shall be to inspect said river, to cause the regulations respecting said fishery to be carried into effect, and to prosecute all violations thereof that shall come to their knowledge, and who shall also be sworn to the faithful performance of their duty in like manner and under like penalties as other town officers: *provided*, that nothing herein contained shall be construed to prohibit the inhabitants of the town of Braintree from taking smelts for their use and consumption, or any of the inhabitants of the towns of Quincy or Weymouth, for the same purpose, two days in each week, to be agreed upon by the town of Braintree at their annual meeting in March or April.

SECT. 2. *Be it further enacted*, That the owners or occupiers of dams across said river shall, during the time said fish are passing up, constantly keep open a passage through, over or round their respective dams, sufficient for the passage of said fish, to the satisfaction of the selectmen of the said town, for the time being, or a major part of them, under penalty of a sum not less than twenty nor more than fifty dollars, for each and every twenty-four hours that they shall neglect to open a passage as aforesaid, from and after said owner or occupier has been notified and required in writing by said committee, for the space of two days so to do.

SECT. 3. *Be it further enacted*, That if any person or persons shall make any wear across said river, or cause any obstructions to the free passage of said fish, contrary to the regulations of the town, the person or persons so offending shall for each offence forfeit and pay a sum not exceeding fifty dollars, nor less than one dollar, at the discretion of the court before whom the same may be tried.

SECT. 4. *Be it further enacted*, That all penalties incurred by a breach of this act, may be prosecuted and sued for before any court of record proper to try the same, by any inhabitant of said town being a freeholder; and no person shall be considered as disqualified from being a witness on any trial that may be had pursuant to this act, by reason of his or her being an inhabitant of said town (who is not a complainant), or of being one of the committee aforesaid.

SECT. 5. *Be it further enacted*, That the town of Braintree shall cause to be given to every poor and necessitous family in said town annually, two hundred of said alewives, and the selectmen of the said town of Braintree for the time being, shall or may determine what necessitous or poor family shall be entitled to the benefit of said fish.

SECT. 6. *Be it further enacted*, That all fines and penalties recovered for a breach of this act, shall be one third part for the use of the complainant, and the other two thirds for the use of the town of Braintree.

SECT. 7. *Be it further enacted*, That the committee chosen by virtue of this act, shall be compensated for their service by the town of Braintree, at such rate as the town may agree upon, at the time they are chosen.

SECT. 8. *Be it further enacted*, That an act entitled "An Act to regulate the taking of fish called alewives, in Monatiquot River in the town of Braintree," passed on the first day of March, in the year of our Lord one thousand seven hundred and ninety-nine, and an act entitled "An Act in addition to an Act entitled An Act to regulate the taking of the fish called alewives in Monatiquot River, in the town of Braintree," passed on the twenty-eighth day of February, in the year of our Lord one thousand eight hundred and twelve, be and hereby are repealed.—[February 20, 1818.

AN ACT to prevent the taking of Fish near the Dam, at the Canal at South Hadley Falls on Connecticut River.

[1794, page 513.]

(Ch. 157.) SECT. 1. *Be it enacted*, That no person or persons at any time hereafter, shall take any salmon or shad within one mile and a half of any part of the dam in Connecticut River, near the canal at South Hadley, with any net, seine, pot, scoop-net or any other machine or instrument whatever. And if any person or persons shall take or catch any salmon or shad, contrary to the true intent and meaning of this act, each person so offending shall, for every such offence, forfeit and pay a fine of twenty dollars.

SECT. 2. *Be it further enacted*, That all nets, seines and other machines and instruments, used in taking salmon and shad as aforesaid, shall be and hereby are forfeited to any person or persons who shall prosecute for the same, with costs of suit, to his or their own use, upon complaint or information to any justice of the peace in and for either of the counties of Hampshire or Hampden; who may thereupon issue his warrant to seize the same, to be kept until trial of the said complaint or information, which the said justices are hereby fully authorized to hear and determine.

SECT. 3. *Be it further enacted*, That all sums of money forfeited by any breach of this act, shall and may be sued for and recovered by action or information, with costs of suit, before any justice of the peace within the counties of Hampshire or Hampden; and one half of such fine shall enure to him or them who shall sue or prosecute for the same; and the other half for the use of the county in which said action or information shall be prosecuted. And any person or persons aggrieved at the sentence of the justice of the peace, given in pursuance of this act, may appeal therefrom to the next circuit court of common pleas, to be holden in the county in which judgment may be rendered.—[February 20, 1818.

AN ACT to prevent the Destruction of Shad and Alewives in the South River, so called, in the Town of Marshfield.

(Ch. 162.) SECT. 1. *Be it enacted*, That the inhabitants of the town of Marshfield, at their meeting for the choice of town officers in March or April annually, be and they are hereby authorized and empowered to appoint three or more persons a committee to superintend the taking of shad and alewives, at such places and on such days as said inhabitants at said meeting shall direct; which committee shall dispose of said fish as said town shall order, and shall be allowed such compensation for all their said services, as said town shall think just and reasonable; and shall settle their accounts annually with the selectmen of said town and pay the balance into their hands for the use of said town.

SECT. 2. *Be it further enacted*, That the said committee or the major part of them be and they are hereby authorized to have made and kept open sufficient sluice-ways at proper times, for the passage of said fish up and down said river, through, over or round all dams for mills or other water-works, which now are or shall hereafter be made over said river in said town; and if any person or persons shall obstruct or impede the passage-ways allowed or authorized by said committee or a major part of them, for the passage of said fish up and down said river, or shall by any means whatsoever, hinder the said fish from passing up and down said river, otherwise than is directed by this act, such person or persons so offending, shall forfeit for every such offence, a sum not exceeding one hundred dollars, nor less than fifty dollars.

SECT. 3. *Be it further enacted*, That if any person or persons other than the said committee or such person or persons as shall be by them employed or permitted, shall take any of the said fish in said river or any stream that belongs to it, at any time or by any means whatever, each person so offending shall forfeit and pay a sum not exceeding ten dollars nor less than five dollars for every such offence.

SECT. 4. *Be it further enacted*, That all penalties incurred by any breach of the provisions of this act, shall be sued for and recovered by the treasurer of said town of Marshfield, for the time being, in any court in the county of Plymouth proper to try the same; and all sums of money so recovered, shall be appropriated to the use of said town; and in case any minor or minors shall offend against any part of said act, and thereby incur any or either of the penalties of this act, in all such cases, the parents, masters or guardians of such minors respectively, shall be answerable therefor; and in case of any prosecution of such minor or minors for any of the aforesaid offences, the action shall be commenced against the parent, master or guardian of such minor or minors respectively and judgment shall be rendered against them in such case, in the same manner as for his or their personal offence.—[February 20, 1818.

1818.

AN ACT to regulate the Fishery in First Herring Brook, in the Town of Scituate.

(Ch. 13.) SECT. 1. *Be it enacted*, That the selectmen of the town of Scituate shall be fish-wardens in said town, and shall have authority to open necessary and convenient sluice-ways through any dam erected on the First

Herring Brook, so called, in said Scituate, and shall annually form and publish such regulations respecting the preservation, and the time and manner of taking alewives in said First Herring Brook, with suitable fines and penalties annexed to the breach of said regulations as they may judge proper; said fines and penalties to be recovered by action or complaint in any court having competent jurisdiction: *provided*, said regulations are not inconsistent with the constitution and laws of this Commonwealth; and *provided*, also, that the said town of Scituate at any legal meeting for that purpose, shall have power to dispose of the right of fishing in said First Herring Brook, according to the regulations aforesaid, to such persons and upon such terms as they may determine to be proper; and all fines and penalties which may be recovered for breaches of this act, shall inure one half to the complainant or person who may sue for and recover the same, and the other half to the poor of said town of Scituate. And the said regulations which may be so formed and adopted by the selectmen, shall be recorded in the town records; and it shall be deemed sufficient notice to all persons of the publication of said regulations, by posting them up in three several places in the said town, as the discretion of the selectmen may direct.—[June 12, 1818.

AN ACT to repeal all Laws heretofore made for regulating the Alewife Fishery in the Towns of Bridgewater and Halifax, in the County of Plymouth.

(Ch. 83.) **SECT. 1.** *Be it enacted*, That all the laws heretofore made for regulating the alewife fishery in the towns of Bridgewater and Halifax, in the county of Plymouth, or either of them, or that may require any passage-way for said fish at any mill-dam in said towns, or either of them, excepting Pratt's dam, so called, in Titicut, be and the same are hereby repealed, so far as they respect either of said towns.—[February 15, 1819.

AN ACT to prevent the Destruction of the Fish called Tom Cod and Smelts in Charles River, and to regulate the manner of taking the same.

(Ch. 109.) **SECT. 1.** *Be it enacted*, That from and after the passing of this act, if any person or persons shall place or set any seine or net, or set up, erect or place any obstruction or incumbrance whatsoever (mill-dams excepted) in or across Charles River, whereby the free passing of the fish up and down said river shall be straightened, obstructed or stopped, they shall severally forfeit and pay the sum of fifty dollars for each and every offence, one half of which shall be to the use of him or them that shall sue or prosecute therefor, and the other half to the use of the town or towns within whose limits the offence is committed; or any town may sue in the name of its inhabitants, and in that case the whole penalty shall be to the use of the town thus suing.

SECT. 2. *Be it further enacted*, That if any person or persons shall draw or use any seine or net of a greater length than fifteen feet, or shall make use of more than one net or seine at the same time, to take any of the fish called tom cod and smelts within said river, or shall draw any such seine or net on any other of the days of the week than Monday, Wednesday and Friday, they shall severally forfeit and pay the sum of forty dollars for each and every offence, to the use as aforesaid; and all other forfeitures incurred by any breach of this act may be recovered by an action on the case before

any court proper to try the same: *provided*, that nothing contained in this act shall be construed to subject any person or persons to any of the penalties aforesaid by reason of their happening to take any of the said fish called tom cod and smelts, when they shall rightfully draw or use a seine or net, the meshes of which are not less than one inch square, for the purpose of taking shad and alewives, in the usual and proper season of taking those fish.—[February 19, 1819.

1819.

AN ACT in further addition to the several Acts for regulating the Fishery in Merrimack River.

[1807, p. 56; 1805, p. 577; 1804, p. 441; 1803, p. 43; 1795, p. 35; 1794, p. 511; 1793, p. 442; 1790, p. 272; 1812, ch. 84. Additional Acts, 1820, ch. 70; 1822, ch. 75.]

(Ch. 4.) SECT. 1. *Be it enacted*, That from and after the first day in July in each and every year, the penalties contained in the several acts heretofore passed for regulating the fishery in Merrimack River, shall not extend to or be in force against any person drawing a net or seine for the purpose of taking the fish called menhaden, or any other sea or salt water fish, anywhere below Essex Merrimack bridge; anything in the several acts before mentioned to the contrary notwithstanding.—[June 11, 1819.

AN ACT respecting the Fishery in the Towns of Rehoboth and Swanzey.

[1804, p. 378. Additional Act, 1820, ch. 21.]

(Ch. 11.) SECT. 1. *Be it enacted*, That from and after the passing of this act, if any person or persons shall attempt to take any shad or alewives with a seine, or drag-net, or scoop-net, set or drawing in Palmer's River, or the branches thereof, at any time or place otherwise than is allowed by law within the towns of Rehoboth or Swanzey, shall forfeit and pay seven dollars for each and every offence, to be recovered by action of debt in any court proper to try the same, one moiety to him or them who shall prosecute for the same, and the other moiety to the town in which the offence is committed.

SECT. 2. *Be it further enacted*, That any seine, drag-net or scoop-net which shall be found set or drawing in said Palmer's River, or any branch thereof, with or without the owner of the same, or any other person, shall be forfeited to the use of the poor of the town in which the offence is committed; and if any person or persons shall make, or cause to be made, any weare within eight rods of another in said river, he or they shall forfeit and pay a fine of seven dollars, to be recovered and appropriated as aforesaid.—[June 12, 1819.

AN ACT further regulating the Fishery in Merrimack River and the Streams running into the same.

[1789, p. 272; 1792, p. 442; 1793, p. 551; 1802, p. 43; 1803, p. 441; 1804, p. 577; 1806, ch. 28; 1811, ch. 175; 1812, ch. 84. Section 7 of this Act suspended 1820, ch. 22; repealed 1820, ch. 70. Act of 1817, ch. 16 (not in manuscript), repealed. The fourth and fifth sections repealed by Act 1832, ch. 56. Additional Act, 1866, ch. 238.]

(Ch. 20.) SECT. 1. *Be it enacted*, That if any person or persons shall erect or cause to be erected any mill-dam or weare, or shall place any stones, timber, boards, plank or gravel, or any other obstruction or incumbrance in or across the Merrimack River, or any of the rivers or streams running

into the same, or continue or suffer to be continued any such obstruction or incumbrance as before mentioned, as hath heretofore been erected or placed so as to prevent or obstruct the free passage of the salmon, shad or alewives in their usual course up and down said rivers and streams, at the time of their passing up to cast their spawn, and returning down of said fish and the young fry; the person or persons so offending, instead of the penalty heretofore provided by law for such offence, shall forfeit and pay a sum not exceeding five hundred dollars, nor less than one hundred dollars, at the discretion of the court before whom the conviction may be had, to be recovered by action or indictment; one half to the use of the county, and the other half to the person or persons who may sue or prosecute for the same; and the court before whom such conviction may be had shall cause the obstruction to be removed at the cost and charge of the offender or offenders.

SECT. 2. *Be it further enacted*, That if any person or persons shall at any time, with a spear or other instrument or machine, by torch-light or candle-light, catch, kill or destroy any salmon, shad or alewives in any of the rivers or streams aforesaid, or shall with jack and spear, by torch-light or candle-light fish for the purpose of catching any salmon, shad or alewives, every such person so offending shall forfeit and pay the sum of fifty dollars, to be recovered and appropriated as aforesaid.

SECT. 3. *Be it further enacted*, That if any person or persons shall catch any salmon, shad or alewives in any part of Merrimack River, or in any river or stream running into the same, or shall draw or drag any seine, drag-net or fly-net, or set any net or pot, or use any other machine, or suffer such to be continued or set for the purpose of catching any of the said fish, in any of the said rivers or streams, at any other time or times than by the laws of this Commonwealth are expressly allowed and permitted, every such person so offending, instead of the penalty heretofore provided by law for such offence, shall forfeit and pay a sum not exceeding one hundred dollars, nor less than fifty dollars, to be recovered and appropriated as aforesaid.

SECT. 4. *Be it further enacted*, That each and every fish-warden, sheriff, deputy-sheriff, constable and grand juror is hereby empowered to command the assistance of any person or persons which they or any of them may judge necessary for carrying this act, and the several acts to which this is in addition into full effect, in the same manner as sheriffs are empowered to command aid in a civil or criminal process.

SECT. 5. *Be it further enacted*, That all seines, nets and pots, of every sort and description used for the purpose of catching any of the aforesaid fish, if found in either of said rivers or streams, or within the banks of the same on any day or time when by law it is not permitted or allowed to catch any of said fish, each and every such seine, net, pot or other instrument, shall be forfeited, together with any boat, in which the same may be found; and the same may be seized by a fish-warden, sheriff, deputy-sheriff, constable or grand juror, and prosecuted for in the same way and manner as by law provided, when seines are seized for breach of the laws for regulating the fisheries in said rivers and streams; and the net proceeds, after paying all costs and charges, shall be for the sole use of the person who may seize and prosecute for the same, except when complaint shall be made by any other person; in which case the informant or person complaining shall be entitled to one half, and the other half shall enure to the county where the offence is or may be committed.

SECT. 6. *Be it further enacted*, That if any person or persons shall fish with seine or net more than eighteen rods long in Merrimack River, or twelve rods long in Concord River, or extend more than one seine or net on the same fishing grounds at one and the same time, instead of the penalties heretofore provided by law, shall, for every such offence, forfeit and pay a fine of fifty dollars; and such seines and nets, together with the boat or boats so employed, shall be forfeited and the same may be seized and prosecuted for in manner aforesaid.

SECT. 7. *Be it further enacted*, That it shall be the duty of the proprietors of the Middlesex Canal to cause to be erected and kept in repair in said canal, on both sides of said Concord River, such gates, constructed of wire or other materials, as may be sufficient to prevent the passage of the fish or young fry through said canal, either toward Merrimack River or toward Medford; and shall not allow the said gates or either of them to be kept open, excepting at the time of passing any boat or raft, in either direction in said canal; and no longer at any time, than may be sufficient for the passing of such boat or raft through the said gates; and for failure or neglect of the duty herein enjoined, they shall forfeit and pay a sum not exceeding five hundred dollars, nor less than one hundred dollars, to be recovered and appropriated as aforesaid.

SECT. 8. *Be it further enacted*, That the act entitled "An Act further regulating the fishery in Merrimack River," passed on the fourteenth day of June, eighteen hundred and seventeen, be and the same is hereby repealed: *provided, however*, that the said act shall be in full force as to the prosecutions commenced under the said act.—[June 18, 1819.]

AN ACT to prevent the Destruction of Fish in the several Ponds in the Town of Haverhill.

(Ch. 98.) SECT. 1. *Be it enacted*, That from and after the passing of this act, no person shall take, catch or kill any pickerel or other fish in the several ponds in the town of Haverhill, in the county of Essex, with any instrument whatever, at any time between the first day of December in each year, and the first day of May following, and no person shall catch, kill or destroy any pickerel or perch in said ponds, or in the several brooks running into or out of the same, with any spear, grapple, seine, net or pot, at any time after the passing of this act. And every person so offending against the provisions of this act, shall for each and every offence, forfeit and pay the sum of two dollars, to be recovered with costs of suit in an action of debt, by any person or persons who shall sue for the same, to his or their use, before any justice of the peace within and for the county of Essex.

SECT. 2. *Be it further enacted*, That the inhabitants of Haverhill, aforesaid, may, at their annual meeting in March or April, in any year, by vote, suspend the operation of the prohibitions and restrictions contained in the first section of this act, or any part of the same, for any term of time not exceeding one year, as to them shall seem expedient.—[February 7, 1820.]

AN ACT in addition to an Act entitled "An Act for the preservation of the Fish called Alewives in the Wewantit River in the County of Plymouth, and for the regulating the Taking said Fish."

[1797, p. 214. Additional Act, 1836, ch. 218.]

(Ch. 118.) SECT. 1. *Be it enacted*, That from and after the twenty-fifth day of June next, no person shall be liable to pay any penalty or forfeiture

for taking fish called alewives in Weweantit River, or in any pond or stream having connection therewith, from the twenty-fifth day of June, to the fifteenth day of March, annually, any law to the contrary notwithstanding. —[February 15, 1820.

AN ACT to repeal all Laws heretofore made regulating the Alewife Fishery in the Town of Kingston in the County of Plymouth, so far as they relate to Jones River, above and including Adams' mill-dam, so called, and also so far as they relate to Stony Brook in said Town.

[1801, p. 502.]

(Ch. 125.) SECT. 1. *Be it enacted*, That all the laws heretofore made regulating the alewife fishery in the town of Kingston, in the county of Plymouth, so far as they relate to Jones River, above and including Adams' mill-dam, so called, and also so far as they relate to Stony Brook in said town, be and the same are hereby repealed.—[February 21, 1820.

AN ACT to regulate the Fishery in Taunton Great River.

[Repeals all previous Laws except so far as respects the Town of Middleborough. Additional Act, 1822, ch. 33.]

(Ch. 133.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any persons, except as is hereinafter provided, to catch shad and alewives with seines or nets in the Taunton Great River, from the fifteenth day of March to the first day of June in each year: *provided*, that it shall and may be lawful for the inhabitants of the several towns situated on said river, to catch shad and alewives with seines or nets in said river, with twelve seines or nets only, in the manner following, to wit: the towns of Wellington, Dighton, Somerset, Freetown and Troy shall each have the right of disposing at public auction, for their own benefit, of the privilege of catching shad and alewives with one seine or net only; the towns of Berkley and Raynham shall each have the right of disposing at public auction, for their own benefit, of the privilege of catching shad and alewives with two seines or nets only; and the town of Taunton shall have the right of disposing at public auction, for their own benefit, of the privilege of catching shad and alewives with three seines or nets only, in the river aforesaid, for the time aforesaid; and the purchaser or purchasers of the privileges which shall be located in the towns of Raynham and Taunton shall not have a right to sweep with a seine or net more than fifteen rods in length; and the towns of Berkley and Wellington shall not have a right to sweep with a seine or net more than twenty rods in length, and but four days in each week, beginning at four o'clock on Monday morning and ending at four o'clock on Friday morning; the purchaser or purchasers of the privilege or privileges which shall be located in the town of Dighton, shall have a right to sweep with a seine or net, thirty rods in length and no more, five days in each week, beginning at four o'clock on Monday morning and ending at four o'clock on Saturday morning; and the purchaser or purchasers of the privilege or privileges which shall be located in either of the towns of Somerset, Freetown or Troy shall have a right to sweep with a seine or net forty rods in length and no more, five days in each week, beginning at four o'clock on Monday morning and ending at four o'clock on Saturday morning; and *provided, also*, that each of the said towns shall, at a legal meeting between the first day of September and the last day of December in

each year, dispose and make sale of, at public auction, for the next year, and so from year to year, their privilege or privileges of catching shad and alewives with seines or nets in the river aforesaid for the time aforesaid, to such person or persons as shall offer the most for the same and give sufficient security for the payment of the purchase money, at such time and in such manner as the respective towns shall order.

SECT. 2. *Be it further enacted*, That the several purchasers of the respective privileges aforesaid, shall select the place where they intend to use their seine or net for the purpose of catching shad and alewives, and shall file a certificate thereof with the clerk of the town within which they have determined to exercise their said privilege as aforesaid, on or before the first day of March in each year: *provided*, that the privilege which shall be purchased of the said town of Somerset shall be exercised within the limits of said town; and the person or persons so purchasing and locating the privileges aforesaid, shall have the right to catch shad and alewives in the river aforesaid, for the time aforesaid, and no other person.

SECT. 3. *Be it further enacted*, That no purchaser of a privilege, as aforesaid, shall make use of a seine or net for the purpose aforesaid, at any other place in said river than the place so selected and certified as aforesaid, during the time aforesaid; and no two seines shall be located or swept within half a mile of Robinson's bridge, so called, in Raynham; and no seine or net shall be swept more than forty rods on the bank of said river; and no two seines shall be allowed to be swept within the same limits, on the same side of said river; and no person whatever shall be permitted to set any seine, net, weare or other obstruction, in or across said river or any part thereof, or any waters connected with said river (Broad Cove, so called, in Somerset, excepted), for the purpose of taking shad or alewives, or obstructing their passage along the said river, during the time aforesaid.

SECT. 4. *Be it further enacted*, That if any person or persons shall draw or sweep with any seine or net, on any day or time other than as before expressed, or at any other place than those selected and located as aforesaid; or shall on any day or at any place set any seine or net, weare or other obstruction in or across said river, or any part thereof, or any waters connected with the same (Broad Cove aforesaid, excepted), with the intention to catch or destroy any of the fish called shad or alewives within the time limited in the first section of this act, he or they shall forfeit and pay fifty dollars for each and every such offence, to be recovered by indictment or information, to the use of the county in which the offence shall be committed, or by action of debt; one half thereof, after deducting all necessary expenses of the prosecution, to the use of him or them who shall sue for the same, and the other half to the use of the town in which the offence shall be committed.

SECT. 5. *Be it further enacted*, That if any person or persons shall be found sweeping with any seine or net, or if any seine or net shall be used by any person contrary to the true intent and meaning of this act, it shall and may be lawful for any fish-warden or inspectors, to be chosen by virtue of this act, or the law regulating the fishery in the town of Middleborough, to seize or take such seine or net and convert and retain the same to his or their own use or benefit, without any suit or process whatsoever; and if prosecuted therefor, to plead the general issue and give this act in evidence as though the same had been pleaded specially.

SECT. 6. *Be it further enacted*, That the several towns aforesaid shall, at their annual meetings in the month of March or April, choose by ballot three or more suitable persons, being freeholders in said town, as fish-wardens, whose duty it shall be, jointly and severally, to see that this act is enforced, and to prosecute for all breaches thereof; and each fish-warden so chosen shall be sworn to the faithful discharge of his duty; and the said fish-wardens, when sworn, are authorized to measure seines and nets, and to pursue and execute the duties of their office in any place within the towns aforesaid. And if any person chosen a fish-warden as aforesaid, shall refuse or neglect to be sworn as aforesaid, for the space of five days after he shall be duly notified of his election as aforesaid, he shall forfeit and pay a fine of ten dollars, to the use of such town, to be recovered by action of debt by the treasurer thereof, and such town shall proceed to a new choice; and so on, as often as circumstances shall require. And if any of the towns aforesaid shall neglect to choose fish-wardens as aforesaid, or to make sale of their privileges aforesaid, within the time limited therefor, according to the meaning of this act, such town shall forfeit and pay a fine of one hundred dollars, for the use of him or them who shall prosecute for the same.

SECT. 7. *Be it further enacted*, That all the laws heretofore made for the regulation of the fishery in Taunton Great River (except so far as respects the town of Middleborough), be and the same are hereby repealed: *provided, however*, that any prosecutions which have been or may be commenced for the recovery of any forfeitures incurred by virtue of the laws hereby repealed, may be prosecuted to final judgment and execution, in the same manner as if this act had not been passed; and *provided, also*, that all contracts made prior to the passing of this act, by any of the towns aforesaid, respecting the fishery aforesaid, by virtue and in pursuance of the laws hereby repealed, shall be valid to all intents and purposes; this act to the contrary notwithstanding; and *provided, further*, that the inhabitants of the respective towns aforesaid, who have not already disposed of their privileges as aforesaid, for the present year, by virtue and in pursuance of the laws hereby repealed, shall and may dispose of the same at any time before the first day of March next.—[February 21, 1820.]

AN ACT regulating the Taking of Fish called Alewives in the Town of Middleborough.

[1815, ch. III. Additional Acts, 1833, ch. 137; 1837, ch. 193.]

(Ch. 137.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall and may be lawful for the inhabitants of the town of Middleborough, in the county of Plymouth, to take the fish called alewives at the Old Stone Wear, so called, in said town, on Wednesday, Thursday, Friday and Saturday of each week during the time said fish are allowed to pass the aforesaid place, and at no other time at the place aforesaid; any law to the contrary notwithstanding.—[February 21, 1820.]

1820.

AN ACT to suspend the operation of the Seventh Section of an Act entitled "An Act further regulating the Fishery in the Merrimack River and the Streams running into the same."

[1819, ch. 20. Additional Act, 1866, ch. 233.]

(Ch. 22.) SECT. 1. *Be it enacted*, That the seventh section of an act entitled "An Act further regulating the fishery in Merrimack River, and the

streams running into the same," passed on the eighteenth day of June, in the year of our Lord one thousand eight hundred and nineteen, be and the same is hereby suspended in its operation, until the first day of April next.—[June 17, 1820.

AN ACT to regulate Passage-Way for Fish through the Dam near the Mouth of Concord River, in the County of Middlesex.*

(Ch. 38.) SECT. 1. *Be it enacted*, That so long as there shall be kept and upheld a dam across Concord River, between the towns of Chelmsford and Tewksbury, in the county of Middlesex, where the dam of Thomas Hurd's factory now is situated, it shall be the duty of the owner, occupant or person upholding said dam, to cause to be made a sluice or passage-way, for fish to pass freely up and down the river through said dam; and the same shall be constructed with a permanent mud-sill, to be placed at the bottom of the natural channel of said river, and to extend from the shore of the island in said river, not less than fifteen feet towards the factory, in the direction of the present dam, with permanent abutments, and a cross timber at the top not less than thirty inches above the mud-sill; and the whole of said passage-way shall be kept open, from the first day of April to the twentieth day of May in each year, except only that when by reason of the falling of the water in said river, there shall not be more than twelve inches of water above said mud-sill, the said passage-way may, with the advice and consent of the fish-wardens of the towns of Chelmsford and Tewksbury, given in writing, be diminished in proportion to the depth of the water: *provided, however*, that it shall never be reduced to a less depth than five feet from the abutment on the west side.

SECT. 2. *Be it further enacted*, That so long as the owner, occupant or upholding said dam shall cause to be made and kept a sluice or passage-way for fish through said dam, of the dimensions and constructions aforesaid, according to the true intent and meaning of this act, he shall not be liable to any penalty or prosecution by force of any act relative to the obstruction of the passage of fish up and down said river.

SECT. 3. *Be it further enacted*, That no person shall be permitted to obstruct the free passage of fish during the aforesaid months of April and May, by taking them in any manner, at the said passage-way.

SECT. 4. *Be it further enacted*, That this act shall continue in force for the term of ten years and no longer.—[January 24, 1821.

AN ACT in addition to the several Acts heretofore passed, to regulate the Fishery in Rehoboth and Swanzey.

[1803, p. 378; 1819, ch. 11. Additional Act, 1836, ch. 130.]

(Ch. 51.) SECT. 1. *Be it enacted*, That no person whatever shall be permitted to set any seine, net, weare or other obstruction across Palmer's River in Swanzey, at any time between the first day of April and the twentieth day of June in each year, for the purpose of obstructing the passage of fish up the said river into Rehoboth; and if any person or persons shall, within the time aforesaid, set any seine, net, weare or other obstruction across said river for the purpose aforesaid, he or they shall forfeit and pay a fine of seven dollars for each and every such offence, to be recovered by

action of debt, one half to the use of him or them who shall prosecute therefor, and the other half to the use of the town in which the offence shall be committed; and such seine or net so set across said river, shall also be forfeited to the use of him or them who shall prosecute for the same.— [February 9, 1821.

AN ACT for the regulation of the Shad and Alewife Fishery in Cambridge, Charlestown, Medford and West Cambridge.

[1789, p. 238; * 1793, p. 512; 1802, p. 98; 1815, ch. 54. Additional Act, 1836, ch. 153; 1845, ch. 149, repealing fifth section of this Act.]

(Ch. 67.) SECT. 1. *Be it enacted*, That the act passed on the sixteenth day of February, in the year of our Lord one thousand seven hundred and eighty-nine, entitled "An Act to prevent the destruction of the fish called shad and alewives in Mystic River, so called, within the towns of Cambridge, Charlestown and Medford, and for repealing all laws heretofore made for that purpose," shall be taken and construed to extend to the town of West Cambridge in the county of Middlesex, as fully, to all intents and purposes, as if the town of West Cambridge had been originally named in said act; and it shall be lawful for the inhabitants of the said town of West Cambridge to catch and take any of the said fish within the limits of said town, on all such days and times as by the provisions of the act aforesaid it is made lawful for the inhabitants of the said town of Cambridge to catch them, and on no other days or times.

SECT. 2. *Be it further enacted*, That any member of the several committees for the preservation of fish, annually to be chosen in each of said towns of Cambridge, Charlestown, Medford and West Cambridge, shall have full power and authority to do any act or thing in any or either of the said towns which heretofore might have been lawfully done by a majority of either of said committees within the town where such committee was chosen, and shall be entitled to and enjoy all the privileges and protection, when in the exercise or discharge of their duties in either of said towns, which a majority of either or any of the said committees were heretofore entitled to and enjoyed, when acting in discharge of their said duties within the limits of the particular town for which such committee was chosen. And any person who shall disturb or hinder any or either of said committee-men in the execution of the duties of their said office, shall forfeit and pay for every such offence a sum not exceeding twenty dollars nor less than ten dollars; and each and every pecuniary penalty to be forfeited and paid by the aforesaid act for a breach or violation of any of the provisions thereof, is hereby raised and increased to a sum not exceeding twenty dollars nor less than ten dollars, in lieu of the sums therein mentioned, to be forfeited and paid respectively.

SECT. 3. *Be it further enacted*, That for the better securing to the said towns of Cambridge, Charlestown, Medford and West Cambridge their equal benefit from said fishery, the said town of Medford shall be restricted to fish only on the ebb-tide, on such days as by the act aforesaid are provided for the inhabitants of said Medford to take said fish; and every person who shall take or catch any of said fish upon the flood-tide, any net, seine or

* This Act (1789, page 238) was limited to five years.

other fishing implement for the purpose of catching any of said fish, or to obstruct their passage up or down said rivers, streams or waters aforesaid, shall for each and every such offence incur the like forfeitures and penalties as shall be incurred by force of this act, by any person who shall catch or take any of said fish contrary to the provisions of the act mentioned in the first section of this act.

SECT. 4. *Be it further enacted*, That the inhabitants of the said town of Charlestown shall be prohibited and restricted from setting or continuing any net, seine or other fishing implement in any of the rivers, streams or waters aforesaid, only while actually drawing or dragging for said fish, except as is hereinafter provided; and every person who shall, within the town of Charlestown, set or continue any such net, seine or other fishing implement in any of the rivers or waters aforesaid, which may stop or obstruct the passage of said fish up or down the same, unless such person, at the same time, shall be actually engaged in drawing or dragging for said fish, except as is hereinafter provided, shall, for each and every such offence, incur like forfeitures and penalties as shall be incurred by force of this act, by any person who shall catch any of said fish contrary to the provisions of the act mentioned in the first section of this act: *provided, nevertheless*, that nothing herein contained shall be construed to deprive the said inhabitants of Charlestown of the right of setting and having one stationary net or seine in Little River, so called, at any and all times between the hours of twelve of the clock at noon and twelve of the clock on the following night, on all such days as are lawful for said inhabitants to take said fish.

SECT. 5. *Be it further enacted*, That no net, seine or other fishing implement shall ever be placed or used in the said Mystic River, nor in the said Little River, within fifteen rods from the point where the waters from those two rivers meet; and every such net, seine or other fishing implement which shall be found situated in either of said rivers contrary to the provision aforesaid, shall be wholly forfeited to the use of any person who shall find the same; and every person who shall be guilty of placing or putting any such net, seine or other fishing implement in either of said rivers, within fifteen rods from the meeting of the waters of those rivers as aforesaid, shall forfeit and pay for each and every such offence, the sum of twenty dollars, to be recovered before any justice of the peace for said county of Middlesex. And any person who shall be guilty of opposing or hindering the removal of any net, seine or fishing implement which shall be found situated in either of said rivers, contrary to the provisions of this section, shall forfeit and pay the sum of twenty dollars, to be recovered in the same manner as the forfeiture last above mentioned.

SECT. 6. *Be it further enacted*, That any person or persons who shall at any one time catch or have in his or their possession, within either of said towns of Cambridge, Charlestown, Medford or West Cambridge, any of said fish, after they have cast their spawn, to the number of twenty or upwards, shall forfeit and pay for each and every offence, a sum not exceeding twenty dollars, nor less than ten dollars.

SECT. 7. *Be it further enacted*, That every net, seine or other fishing implement which shall be placed or used in any of the rivers, streams or waters aforesaid, within either of said towns, contrary to the provisions of

this act, as also all fish that shall be taken contrary to any of the provisions of either of said acts, shall all be forfeited to the use of any person or persons who shall detect or discover any of such fish to be taken as aforesaid, or any such net, seine, or other such fishing implement to be situated or used as aforesaid; and all forfeitures or penalties to be incurred for a breach of either of the acts aforesaid, shall be recoverable by any of the inhabitants of either of said towns of Cambridge, Charlestown, Medford and West Cambridge, in an action of debt, before any court proper to try the same; one half the amount thereof to the use of the plaintiff in such action, and the other half thereof to the town where he belongs.—[February 14, 1821.

AN ACT to regulate the Passage-Way for Fish through the Canal Mill-Dam, in Billerica, and for other Purposes.*

[1811, ch. 175.]

(Ch. 70.) SECT. 1. *Be it enacted*, That so long as there shall be kept and upheld a dam across Concord River, in the town of Billerica, where the mill-dam of the proprietors of the Middlesex Canal now is situated, there shall be kept open at the usual place in said dam, a sluice or passage-way for the fish to pass up and down the river through said dam, from the first day of April to the twentieth day of May in each year; which sluice or passage-way shall be constructed with a permanent mud-sill, to be placed upon the bottom of the natural channel of said river, with permanent abutments and a cross timber at the top, not less than thirty inches above the mud-sill, and shall not be less than fifteen feet in breadth, except only when by reason of the falling of the water in said river, there shall not be more than twenty-four inches of water above said mud-sill, the said passage-way with the advice and consent of the fish-wardens of Billerica, given in writing, may be diminished in proportion to the depth of the water: *provided, however*, that it shall never be reduced to a less breadth than six feet.

SECT. 2. *Be it further enacted*, That so long as said proprietors, occupant or person upholding said mill-dam, shall cause to be kept open a sluice or passage-way for fish through said dam, of the dimensions aforesaid, and for the time aforesaid, neither of the said proprietors, or any tenant or occupant of said mill or mill-dam, shall be liable to any penalty or prosecution whatever, by force of any act relative to the obstruction of the passage of fish up and down said river.

SECT. 3. *Be it further enacted*, That the seventh section of an act entitled "An Act further regulating the fishery in the Merrimack River, and the streams running into the same," passed the eighteenth day of June, one thousand eight hundred and nineteen, be, and the same is hereby repealed.—[February 14, 1821.

1821.

AN ACT to prevent the Destruction of Fish in the Town of Framingham.

(Ch. 15.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person to set or use more than one hook, at any one time, on any of the ponds or streams within the town of

* This Act repeals the seventh section of ch. 20, 1819.

Framingham, in the county of Middlesex; nor shall it be lawful for any person or persons to draw any seine or net, in any of the ponds or streams in said town; nor shall it be lawful for any person to set any pot or net in any of the streams aforesaid. And if any person or persons shall, after the passing of this act, be found using or setting more than one hook, at any one time, such person or persons shall, for each hook so set or used, after the first, forfeit and pay a sum not less than one dollar; and if any person or persons shall, after the passing of this act draw any seine or net in any of the ponds or streams within said town, or shall set any pot or net within any of the streams aforesaid, he or they so offending, shall forfeit and pay a sum not less than five dollars, and shall forfeit the pot, seine or net so used to the use of the said town.

SECT. 2. *Be it further enacted*, That all penalties incurred by any breach of this act, may be recovered by any person who shall sue for the same in any court in said county of Middlesex, proper to try the same. And if any minor or minors shall offend against the provisions of this act, and shall thereby incur any of the penalties aforesaid, the parent, master or guardian of such minor or minors shall be answerable therefor; in which case the action shall be commenced against such parent, master or guardian (as the case may be) of such minor or minors, and judgment rendered accordingly: *provided, however*, that the inhabitants of said town of Framingham may, at their meeting in March or April annually, suspend in whole or in part, the provisions and restrictions of the act aforesaid, for any term of time, not exceeding one year.—[June 15, 1821.

AN ACT to empower the Proprietors of Flint's Mills, on Ipswich River, to alter the Passage for the Fish in the Dam of said Mills.

(Ch. 27.) SECT. 1. *Be it enacted*, That the proprietors of Flint's Mills, in Middleton, in the county of Essex, be, and they hereby are authorized and empowered to discontinue the way now required by law to be kept open for the passage of fish through the dam of said mills, any law to the contrary notwithstanding: *provided, nevertheless*, that the said proprietors shall cause to be constructed on the southerly side of said dam, within six months from and after the passing of this act, a good and sufficient passage for the fish, and shall keep the same in good repair; which passage shall be approved and allowed by the major part of a committee to be composed of the fish-wardens of the towns of Danvers and Middleton, in the county of Essex, and the town of Reading in the county of Middlesex.—[June 16, 1821.

AN ACT to regulate the Pass-way for Fish in Beaver Brook, in the Town of Dracut.

(Ch. 62.) SECT. 1. *Be it enacted*, That instead of the passway now required by law to be kept in said brook at the mills owned by Artemas Stanley and Sewall Stanley in the town of Dracut, in the county of Middlesex, the owners shall be, and hereby are required to keep open a passway for the passage of fish called alewives, of the following dimensions: beginning at the dam, near the factory floom, six feet in width, on a level with the bottom of said floom, and running by the side of said floom to the factory wall, then turning and running twenty feet down by the side of said dam, three

feet and a half wide, with stoppers on each side, with a board or plank, to be placed across the head of said course, six inches in width, and the said head to keep open and in sufficient repair at all times while said fish are passing up and down said brook.

SECT. 2. *Be it further enacted*, That so long as the owners of said mill shall keep open said course and in good repair in the manner aforesaid, they shall not be subject to any of the penalties or restrictions of any law regulating the passage of fish in the said brook; and no person or persons shall be allowed to take any fish in said course, or within thirty feet of the same, in any way or manner, under a penalty of five dollars, to be recovered in an action of debt in any court proper to try the same, to be for the use of him or them who may sue therefor.—[February 8, 1822.]

AN ACT for the preservation and regulation of the Fishery in the Towns of Fairhaven, New Bedford, Dartmouth and Westport.

[Additional Acts, 1849, ch. 128; 1849, ch. 219; 1854, ch. 293.]

(Ch. 97.) SECT. 1. *Be it enacted*, That from and after the first day of March next it shall not be lawful for any person living without the jurisdiction of this Commonwealth, to take any lobsters, tautog, bass or other fish within the harbors, streams or waters of the towns of Fairhaven, New Bedford, Dartmouth and Westport, for the purpose of carrying away from said waters in smacks or vessels owned without the Commonwealth, of any size, nor any owned within this Commonwealth over fifteen tons; and any and every person offending against the provisions of this act shall forfeit and pay the sum of ten dollars for every offence, and also forfeit all the fish and lobsters so taken.

SECT. 2. *Be it further enacted*, That the waters and shores of said towns of Fairhaven, New Bedford, Dartmouth and Westport shall be considered and taken by this act to extend from the line of the state of Rhode Island to the line of the county of Plymouth, including all the waters, islands and rocks lying within one mile of the main land.

SECT. 3. *Be it further enacted*, That all fines and forfeitures that may be incurred for offences against this act, shall be one half to him or them who may first sue for the same, and the other half to the use of the town to which the complainant belongs; and the said fines and forfeitures may be recovered with legal costs of suit, by action of debt or information, before any justice of the peace for the county of Bristol; and any person or persons aggrieved at the sentence of the justice of the peace, given in pursuance of this act, may appeal therefrom to the next court of common pleas, to be holden in the county in which judgment may be rendered.—[February 22, 1822.]

1822.

AN ACT in addition to an Act entitled "An Act to regulate the Fishery in Taunton Great River."

[1819, ch. 133. Additional Acts, 1829, ch. 55; 1832, ch. 44, p. 120.]

(Ch. 38.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for the purchaser or purchasers of any privilege of catching shad or alewives of any of the towns situated on Taunton Great River, to locate the place or places on said river for the purpose of

catching said fish, or sweep or use seines or nets for that purpose, within one hundred rods of the mill-dam lately erected across said river by Samuel Crocker and others, near King's. Bridge, so called; anything in the act entitled "An Act to regulate the fishery in Taunton Great River," to which this is an addition, to the contrary notwithstanding.

SECT. 2. *Be it further enacted*, That it shall not be lawful for the said purchaser or purchasers, or any other person, to impede, interrupt, or turn the course of the fish within the distance of one hundred rods of the mill-dam aforesaid, for the purpose of taking said fish without or beyond that distance.

SECT. 3. *Be it further enacted*, That any person duly convicted of a breach of the second section of this act, shall forfeit and pay the sum of fifty dollars for each and every such offence, to be recovered and appropriated in the manner provided in the fourth section of the act to which this is in addition.—[January 21, 1823.

AN ACT to prevent the Destruction of the Fish called Pickerel or Pike in the Ponds in the Towns of Braintree, Canton and Randolph, in the County of Norfolk.

(Ch. 54.) SECT. 1. *Be it enacted*, That from and after the first day of March next, it shall not be lawful for any person or persons to take any fish called pickerel or pike in any of the ponds called the Great Pond in the towns of Braintree and Randolph, and the Little Pond in the town of Braintree, and the pond called Ponkapoag in the towns of Canton and Randolph, from the first day of December to the first day of April, in each and every year; and every person offending, contrary to the true intention and meaning of this act, upon conviction thereof before any justice of the peace in the county of Norfolk, shall pay a fine of fifty cents for each and every pickerel or pike so taken, to and for the use of the person who shall sue for the same, together with all legal costs of prosecution: *provided, nevertheless*, that either of the towns of Braintree, Canton or Randolph, may, at their annual meetings in the month of March or April, suspend the aforesaid act, so far as respects the ponds in their respective towns, for the term of one year.

SECT. 2. *Be it further enacted*, That all prosecutions for any violations of the provisions of this act shall be instituted within thirty days from the time of committing the same.—[January 31, 1823.

AN ACT to prevent the Destruction of Fish in the Hoosick River within the Towns of Williamstown and Adams.

(Ch. 58.) SECT. 1. *Be it enacted*, That from and after the first day of May next it shall not be lawful to take or catch any fish with nets or seines in the Hoosick River within the towns of Williamstown and Adams; and every person so offending, contrary to the true intent and meaning of this act, upon conviction thereof before any court of competent jurisdiction, shall pay a fine of two dollars, one half to the complainant and the other half to the town in which such offence is committed.

SECT. 2. *Be it further enacted*, That the inhabitants of the aforesaid towns of Williamstown and Adams may, at their annual March or April meeting, by a concurrent vote, suspend the operation of the prohibitions and restrictions contained in this act, for such term of time, not exceeding one year,

as to them shall seem expedient: *provided, however*, that the foregoing act shall not be so suspended within two years from the passing of the same.—[February 3, 1823.

AN ACT regulating the Catching of Salmon, Shad and Alewives in Merrimack River, at the mouth of Shawsheen River in the Town of Andover.

[1789, p. 272; 1792, p. 442; 1795, p. 35; 1812, ch. 84. Additional Act, 1832, ch. 56.]

(Ch. 75.) SECT. 1. *Be it enacted*, That all the laws heretofore made for regulating the catching of salmon, shad and alewives in Merrimack River, so far as they go to prevent their being taken at or near the mouth of Shawsheen River, in the town of Andover, be and the same are hereby repealed.—[February 8, 1823.

AN ACT relative to the Fishery in the Town of West Cambridge.

[1811, ch. 129.]

(Ch. 97.) SECT. 1. *Be it enacted*, That an act passed the twenty-second day of February, in the year of our Lord one thousand eight hundred and twelve, entitled "An Act to regulate the fishery in the town of West Cambridge, and to empower said town to dispose of the privilege of taking the fish called shad and alewives within the limits thereof," be and the same is hereby repealed.—[February 11, 1823.

1823.

AN ACT for the relief of the Danvers Cotton Factory in Danvers.

[1787, p. 191; 1810, ch. 117; 1812, ch. 127; 1814, ch. 52.]

(Ch. 33.) SECT. 1. *Be it enacted*, That the laws heretofore passed relative to alewives in the waters running into Ipswich River be and they are hereby repealed, so far as not to require the continuance of fish-ways at the Danvers Cotton Factory in the town of Danvers, or in the stream running thither from Humphrey's Pond.—[June 14, 1823.

AN ACT to regulate the Fishery in Neponset River in the Towns of Dorchester and Milton.

(Ch. 41.) SECT. 1. *Be it enacted*, That from and after the passing of this act, no person or persons shall be allowed to put or draw any seine or seines whatever in Neponset River, so far as that river forms any part of the dividing line between the towns of Dorchester and Milton, for the taking of fish called smelts and eels; and every person who shall presume to take any fish called smelts and eels with a seine, from said river, shall incur and pay a penalty of five dollars for every such offence.

SECT. 2. *Be it further enacted*, That no person or persons, excepting the inhabitants of the towns of Dorchester and Milton, shall be allowed to take from said river, within the limits aforesaid, in any way whatsoever, any of the fish called smelts or eels, unless by permission of one or more of the selectmen of said towns, and any person not an inhabitant of said towns who shall presume to take any of said fish unless by such permission, shall incur a penalty of five dollars for every offence.

SECT. 3. *Be it further enacted*, That all penalties incurred by a breach of this act, may be prosecuted and sued for before any justice of the peace for the county of Norfolk, by any of the inhabitants of either of said towns, for the use of him or them who shall sue for and recover the same.—[June 4, 1823.

AN ACT more effectually to prevent the Destruction of Shad and Alewives in the Saugus River and its Tributary Streams within the Towns of Lynn, Saugus, South Reading and Lynnfield.

[1801, p. 504; 1803, p. 398; 1843, ch. 187; 1853, ch. 48.]

(Ch. 97.) SECT. 1. *Be it enacted*, That the towns of Lynn, Saugus, South Reading and Lynnfield shall be and they are hereby respectively empowered and directed, at their annual meetings for the choice of town officers, to choose in each town three persons, inhabitants thereof, to see that the laws respecting the passage-ways for shad and alewives be observed, and each person so chosen shall be sworn to the faithful discharge of his duty. And the said committees of said towns shall meet together annually, on or before the first day of April, at such time and place as the person first chosen by the town of Lynn shall appoint, to be by him duly notified. And the major part of those of the said committee who shall be present at such meeting, are hereby empowered and authorized to order the times, places and manner in which said fish may be taken in Saugus River and streams in each of said towns; and the members of said committee shall have joint and concurrent jurisdiction in each of said towns, so far as respects said river and streams. And in case either of said towns shall neglect to choose the committee assigned to it, the committee or committees which shall be duly chosen and sworn within the other towns, or either of them, shall have the powers and shall perform the duties hereby required; and the regulations which shall be so agreed upon by said committees shall be written and posted, in three public places at least, in each of said towns.

SECT. 2. *Be it further enacted*, That the said committees, or the majority of the members, not less than three in number, who shall be present at any meeting duly notified by the first chosen or eldest member of the committee, which shall be chosen in the town of Lynn, or by the request of any three members of the said committees, shall be and they are hereby authorized and empowered to require of the owner or occupant of any dam or sluice-head of any mill erected or that may be erected over said river or streams, to open and keep therein a sufficient passage-way for said fish at such time, on or after the first day of April annually, as the said committees, or the major part of them present, as aforesaid, shall think necessary; and may also require of the owner or occupant of any canal or course whereby any natural stream is or shall be in part changed or altered, to leave sufficient water in the natural stream for the easy and safe passage of the said fish; and upon neglect or refusal of such owner or occupant of any dam or sluice-head, or canal, as aforesaid, to comply with this act, the said committee, or major part who shall be present at any meeting as aforesaid, shall and may cause such sufficient passage-way and opening as they shall judge necessary for the purposes aforesaid, to be made in such dam, sluice-head or canal, with least prejudice to the owner

or occupant, and at his expense. And such passage and opening shall and may be continued at the discretion of said committee, from the time they shall order the same, as aforesaid, and until they shall order or permit the closing of the same, not exceeding the fifteenth day of June in every year. And if any person or persons shall obstruct the passage-way or opening required or allowed by the said committees, or the major part of them, as aforesaid, in any dam, sluice-head or canal within their jurisdiction, as aforesaid, such offender or offenders shall forfeit and pay a sum not exceeding sixty dollars nor less than thirty dollars.

SECT. 3. *Be it further enacted*, That if any persons shall be found taking any of the aforesaid fish on any day, or in any place, or in any manner contrary to the regulations of the said committees, or of otherwise killing and wasting such fish, such offender shall forfeit and pay a sum not exceeding two dollars nor less than one dollar for each offence.

SECT. 4. *Be it further enacted*, That it shall be the duty of the said committees, jointly, and of each committee in their respective towns, to see the observance of this act, and they shall have authority therefor to go upon the land bordering upon the said river or streams, and shall not be considered as trespassers therein; and any person who shall molest said committees, or either of them, in the execution of their office, or shall injuriously obstruct the said river and streams, shall forfeit and pay a sum not exceeding three dollars nor less than one dollar, according to the aggravation of the offence. And all fines and forfeitures given by this act shall and may be sued for and recovered by action of debt in any court proper to try the same, by the said committees or any one of them; one moiety to the use of the prosecutors and the other moiety to the use of the poor of the town in which the offence shall happen.

SECT. 5. *Be it further enacted*, That all laws heretofore made for regulating the said river and streams in Lynn, Saugus, South Reading and Lynnfield, with joint or separate authority, are hereby repealed: *provided, nevertheless*, that nothing in this act shall be so construed as to affect in any way an act passed March third, one thousand eight hundred and two, so far as respects the stream leading from the Flax Pond and emptying into said Saugus River, or any other stream within the said town of Lynn: *provided, also*, that said joint committee shall have no control or jurisdiction over any stream within the town of Lynn other than said Saugus River.—[February 10, 1824.

AN ACT to prevent the Destruction of Fish in the Town of Lincoln.

(Ch. 110.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person to set or use more than one hook at any one time on any of the ponds in the town of Lincoln, in the county of Middlesex, between the first day of December and the first day of April annually; and if any person or persons shall, after the passing of this act, be found setting or using more than one hook at any one time, such person or persons shall, for each hook so set or used after the first, forfeit and pay a sum of not less than one dollar nor more than two dollars.

SECT. 2 *Be it further enacted*, That all penalties incurred by any breach of this act, may be recovered by any person who shall sue for the same in any court in said county of Middlesex, proper to try the same, and if any

minor or minors shall offend against the provisions of this act, and shall thereby incur any of the penalties aforesaid, the parent, master or guardian of such minor or minors shall be answerable therefor, in which case the action shall be commenced against such parent, master or guardian (as the case may be) of such minor or minors, and judgment rendered accordingly: *provided, however*, that the inhabitants of the said town of Lincoln may, at their meeting in March or April annually, suspend in whole or in part the provisions and restrictions of the act aforesaid, for any term of time not exceeding one year.—[February 16, 1824.]

AN ACT to authorize Thomas Manning to erect a Dam across Ipswich River.

[1787, ch. 53.]

(Ch. 136.) SECT. 1. * * * *provided, however*, the said Thomas Manning, his heirs and assigns shall make and keep open through said dam a passage-way for the fish to pass up said river or stream, of the dimensions, and constructed in the same manner and subject to the same rules and penalties as is provided by an act passed March twenty-eighth, one thousand seven hundred and eighty-eight and the acts in addition thereto, to prevent the destruction of alewives and other fish in said Ipswich River.—[February 21, 1824.]

1824.

AN ACT to preserve the Eel Fishery, * * * * *

[1795, ch. 71; 1798, ch. 14; 1799, ch. 19; 1803, ch. 23.]

(Ch. 66.) SECT. 1. *Be it enacted*, That from and after the date of this act, no fisherman or any other person shall take from the waters within the town of Harwich, any eels without a permit from the selectmen of said town, under a penalty of three dollars for each bushel of fish so taken.—[February 12, 1825.]

AN ACT regulating the taking of Fish in the Town of Bridgewater, in the County of Plymouth.

[Additional Act, 1825, ch. 74.]

(Ch. 76.) SECT. 1. *Be it enacted*, That from and after the first day of June next, it shall be lawful for the town of Bridgewater to catch the fish called shad and alewives in Titicut River, so called, which forms the boundary line between the said town of Bridgewater and the town of Middleborough, with a seine or net, and for that purpose they may sell at public auction for their own benefit, the privilege of catching said fish in said river, with one seine or net only, fifteen rods in length, four days in each week, between the fifteenth day of March and the first day of June in each year, to commence at four o'clock on Monday morning and to end at four o'clock on Friday morning, anything in any law of this Commonwealth now existing, to the contrary notwithstanding: *provided*, that the said town of Bridgewater shall, at a legal meeting, between the first day of September and the last day of December in each year, dispose and make sale of at public auction for the next year, and so on from year to year, their privilege of catching shad or alewives with a seine or net, in the river aforesaid, for the time aforesaid, to such person or persons as shall offer the most for the same, and give sufficient security for the payment of the purchase money at such time and in such manner as the said town shall order: *pro-*

vided, also, that it shall not be lawful for said town or the purchaser of said privilege, to catch the fish aforesaid, within seventy-five rods of the dam across said river, known by the name of Pratt's Dam.

SECT. 2. *Be it further enacted*, That the purchaser or purchasers of said privilege shall select the place where he or they intend to use his or their seine or net, for the purpose of catching shad and alewives, and shall file a certificate thereof with the clerk of the town of Bridgewater, on or before the first day of March in each year; and no purchaser of the privilege aforesaid shall make use of a seine or net for the purpose aforesaid, at any other place in said river than the place so selected and certified as aforesaid, during the time aforesaid.

SECT. 3. *Be it further enacted*, That if any person or persons shall, at any time or place other than those admitted by this act, catch or destroy the fish aforesaid, in said Titicut River, he or they shall forfeit and pay a sum not exceeding twenty dollars nor less than five dollars, to be recovered by indictment, complaint or action of debt, in any court proper to try the same, one half to the use of the said town of Bridgewater, and the other half to him who shall sue or prosecute the same; *provided*, that in all prosecutions for any violation of this act, by the fish-inspectors, or any other inhabitant of the town of Middleborough, one half of the penalty shall accrue to that town, instead of the town of Bridgewater.

SECT. 4. *Be it further enacted*, That said town of Bridgewater shall, at their annual meeting in the month of March or April in each year, choose four or more persons, being freeholders in said town, whose duty it shall be to see that this act be duly observed and to prosecute for all breaches thereof; and each person so chosen shall be sworn to the faithful discharge of his duty, and if any person so chosen shall refuse to serve, he shall forfeit and pay to the use of the town of Bridgewater the sum of five dollars, to be sued for and recovered by the town clerk of said town, and said town shall immediately proceed to a new choice.—[February 15, 1825.]

AN ACT for the regulation and preservation of the Fishery in the Towns of Edgarton, Chilmark and Tisbury.

(Ch. 94.) SECT. 1. *Be it enacted*, That from and after the first day of March next, it shall not be lawful for any person living without the jurisdiction of this Commonwealth, to take any lobsters, tautog, bass or other fish within the harbors, inlets, coves or waters of the towns of Edgarton, Chilmark and Tisbury, for the purpose of carrying them away from said waters, in smacks or vessels owned within this Commonwealth over fifteen tons; and any and every person offending against the provisions of this act, shall forfeit and pay the sum of ten dollars for every offence and also forfeit all the fish and lobsters so taken.

SECT. 2. *Be it further enacted*, That the waters and shores of the said towns of Edgarton, Chilmark and Tisbury shall be considered and taken by this act to extend from the whole county of Dukes to all the waters and rocks lying within one mile of the said county.

SECT. 3. *Be it further enacted*, That all fines and forfeitures that may be incurred for offences against this act shall be one half to him or them who may first sue for the same and the other half to the use of the town to which the complainant belongs; and the said fines and forfeitures may be

recovered, with legal costs of suit, by action of debt or information, before any justice of the peace for the county of Dukes; and any person or persons aggrieved at the sentence of the justice of the peace given in pursuance of this act, may appeal therefrom to the next court of common pleas, to be holden in the county in which judgment may be rendered.—[February 22, 1825.

AN ACT to regulate the Fishery in Ipswich River within the Town of Ipswich.

[1810, ch. 117.]

(Ch. 101.) *SECT. 1. Be it enacted*, That from and after the passing of this act it shall be lawful for the inhabitants of the town of Ipswich to sell and dispose of the right of taking the fish called shad and alewives with seines or drag-nets in Ipswich River, within the limits of said town, one day in each week, according to the provisions of an act concerning said fishery, passed on the twenty-third* day of February, in the year of our Lord one thousand eight hundred and eleven, at such place as the fish committee of said town shall direct, the proceeds of such sale to be applied according to the directions of said town at their annual meetings.

SECT. 2. Be it further enacted, That any person other than the purchaser or purchasers of the aforesaid right, or those employed by them, who shall take any of said fish in Ipswich River, within said town, with seines or drag-nets, shall forfeit and pay a sum not less than ten dollars and not exceeding twenty dollars, for each offence, to be recovered by an action of debt in any court proper to try the same, one half thereof to the use of the said town of Ipswich and the other half to him or them who shall sue for the same.—[February 24, 1825.

AN ACT in addition to an Act entitled “An Act to prevent the Destruction and to regulate the Catching of the Fish called Alewives, in their passage up the Rivers and Streams in the Town of Harwich in the County of Barnstable.”

[1787, p. 166; 1813, ch. 57; 1813, ch. 115. Additional Acts, 1837, ch. 135; 1844, ch. 67. This Act modified, 1850, ch. 143.]

(Ch. 107.) *SECT. 1. Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person or persons to catch, by seining thereof, any of the fish called alewives within one mile of the river called Herring River in the town of Harwich aforesaid.

SECT. 2. Be it further enacted, That if any person or persons shall violate the provisions of this act, each person so offending, for each and every such offence shall, on conviction thereof, pay a fine not exceeding three dollars nor less than one dollar, if the quantity of fish is less than one barrel; but if the quantity shall be one barrel or more, such person or persons so offending shall forfeit and pay for each and every barrel of fish so taken, the sum of three dollars.

SECT. 3. Be it further enacted, That any penalties incurred by any breach of this act shall be recovered and appropriated in the manner prescribed by the act to which this is in addition, for the recovery and appropriation of the penalties incurred under the provisions of that act.—[February 24, 1825.

* The Act referred to is probably the one dated the 28th of February 1811.

1825.

AN ACT in addition to an Act entitled "An Act for the regulating and disposing of the Fish called Alewives within the limits of the Town of Weymouth, and for the more effectually securing to the said Town the advantages thereof."

[1800, ch. 73, v. 2, p. 434. Additional Act, 1836, ch. 198; 1846, ch. 92.]

(Ch. 48.) Whereas an agreement has been entered into between the proprietors of the falls and water privileges on Alewife River, and the town of Weymouth, for the removal of the objections which exist in the minds of said proprietors under the act to which this is in addition, to the use of their water power for manufacturing purposes; in pursuance of said agreement:

SECT. 1. *Be it enacted*, That the proprietors of the water-falls and mill privileges on Alewife River in Weymouth, be and they are hereby authorized and empowered to erect proper fish-ways which shall be satisfactory to commissioners to be appointed as is hereinafter provided, and said commissioners, when thus appointed, shall have full power to settle difficulties which may arise between the town and said proprietors, on the complaint of either party, and the cost of such meeting shall be awarded to either party by the commissioners.

SECT. 2. *Be it further enacted*, That his excellency the governor, with advice of council, be and he is hereby authorized and empowered to appoint three suitable persons to be commissioners for the purposes aforesaid. And it shall be the duty of said commissioners when any complaint is filed by either party, to give reasonable notice to the other party of the time and place fixed for enquiring into and deciding on the same, and in case of disagreement, the decision of any two of said commissioners shall be final.

SECT. 3. *Be it further enacted*, That when any obstruction shall be made to the passage of said fish into Whitman's Pond, and repassing from thence to the sea, instead of the fish committee appointed by said town having power, as is provided by the act to which this is in addition, to enter the land of any person or persons for the purpose of removing such obstructions, it shall be the duty of said committee to make complaints thereof to the commissioners aforesaid, who shall proceed to consider, examine and decide upon the same, according to the provisions of this act.

SECT. 4. *And be it further enacted*, That such parts of the act to which this is in addition as is inconsistent with the provisions of this act, be and the same is hereby repealed.—[June 18, 1825.]

AN ACT for the preservation and regulation of the Fishery in the Town of Falmouth.

[1798, p. 222; 1799, p. 289; 1847, ch. 94; 1851, ch. 98; 1853, ch. 130.]

(Ch. 63.) SECT. 1. *Be it enacted*, That from and after the first day of March next, it shall not be lawful for any person living without the jurisdiction of this Commonwealth to take any lobsters, tautog, bass or other fish within the harbors, inlets, coves or waters of the town of Falmouth, for the purpose of carrying them away from said waters in smacks or vessels owned without the Commonwealth, of any size, nor any owned within this Commonwealth over fifteen tons; and any and every person offending against the provisions of this act shall forfeit and pay the sum

of ten dollars for every offence, and also forfeit all the fish and lobsters so taken, or the value thereof.

SECT. 2. *Be it further enacted*, That the waters and shores of said town of Falmouth shall be considered and taken by this act to extend from the shores of said Falmouth, including all the waters, islands and rocks lying within one mile of the main land.

SECT. 3. *Be it further enacted*, That all fines and forfeitures which may be incurred for offences against this act, shall be one half to him or them who may first sue for the same, and the other half to the use of the town to which the complaint belongs; and the said fines and forfeitures may be recoverable, with legal costs of suit, by action of debt or information, before any justice of the peace for the county of Barnstable; and any person or persons aggrieved by the sentence of the justice of the peace, given in pursuance of this act, may appeal therefrom to the next court of common pleas, to be holden in the county in which judgment may be rendered.—[February 15, 1826.]

AN ACT in addition to an Act entitled "An Act regulating the Taking of Fish in the Town of Bridgewater, in the County of Plymouth."

[1824, ch. 76.]

(Ch. 74.) SECT. 1. *Be it enacted*, That from and after the passing of this act it shall not be lawful for the town of Bridgewater, or the inhabitants thereof, to catch the fish called shad and alewives in Titicut River, so called, which forms the boundary line between the said town of Bridgewater and the town of Middleborough, below the point where Newmarket River empties into the said Titicut River, or within twenty rods above that point, anything in the act to which this is in addition to the contrary notwithstanding.—[February 15, 1826.]

AN ACT to regulate the Passage-Ways for Fish in Ipswich River, within the Town of Ipswich.

[1787, ch. 58, v. 1, p. 191; 1796, ch. 66, v. 2, p. 123; 1805, ch. 29. Additional Act, 1829, ch. 40.]

(Ch. 78.) SECT. 1. *Be it enacted*, That instead of the passage-ways now required by law to be kept open at Warner's mill-dam and the dam at Farley's mill, in Ipswich, the owners of said dams, their successors and assigns, shall make and continue in good repair a fish-way over said dams, at the northerly end of the same, of the following description and dimensions: said fish-ways to be made either with wood or stone, beginning at the top of the dams, five feet in width and one foot in depth, and to admit of not less than six inches of water over the dam into said ways, and thence running down stream twenty feet, and terminating at seven feet in width, with stoppers on each side, of plank or stone, running not more than half way across said passage-ways, within two feet of each other; and said head shall be kept open and in good repair at all times from the tenth day of April to the first day of June in each year.

SECT. 2. *Be it further enacted*, That so long as the owners of said dams shall keep open said course or passage-ways, and in good repair, in manner aforesaid, they shall not be subject to any of the penalties or restrictions of any law regulating the passage of fish in Ipswich River.—[February 15, 1826.]

AN ACT to authorize Josiah Robbins to erect and maintain certain Tide-Gates in the Town of Plymouth.

(Ch. 108, General Laws.) SECT. 2. * * * *Provided, however,* that nothing in this act contained shall be deemed to affect any law or laws now in force, or which may hereafter be made, relating to the fisheries in said town brook, nor the right or rights of any person or corporation in relation to said fisheries.

AN ACT in addition to an Act entitled "An Act to prevent the Destruction of Pickerel in the Ponds and Streams within this Commonwealth."

(Ch. 127, General Laws.) SECT. 1. *Be it enacted*, That from and after the passing of this act it shall not be lawful for any person or persons to take any fish called pickerel in any of the ponds, rivers or streams within this Commonwealth, from the first day of December to the first day of April in each and every year; and every person offending contrary to the true intent of this act, upon conviction thereof before any court within this Commonwealth proper to try the same, shall pay a fine of fifty cents for each and every pickerel so taken, to and for the use of the person who shall sue for the same, together with all legal costs of prosecution.

SECT. 2. *Be it further enacted*, That all penalties incurred by any breach of this act may be recovered by any person who shall sue for the same, in any court aforesaid; and if any minor or minors shall offend against the provisions of this act, and shall thereby incur any of the penalties aforesaid, the parent, master or guardian of such minor or minors shall be answerable therefor, in which case the action shall be commenced against such parent, master or guardian, as the case may be, of such minor or minors, and judgment rendered accordingly: *provided, nevertheless*, that the inhabitants of any of the towns within this Commonwealth may, at their annual meeting in the month of March or April, suspend in whole or in part the provisions and restrictions of the aforesaid act, so far as respects the taking of pickerel in the ponds, rivers or streams within their respective towns, for any term of time not exceeding one year.

SECT. 3. *Be it further enacted*, That all prosecutions for any violation of the provisions of this act, shall be instituted within thirty days from the time of committing the same.—[February 26, 1826.]

1826.

AN ACT to prevent the Destruction of Fish in the Harbour of Edgartown, by Seining thereof.

[Additional Acts, 1851, ch. 77; 1856, ch. 285.]

(Ch. 54.) SECT. 1. *Be it enacted*, That from and after the passing of this act it shall not be lawful for any person or persons to catch, by seining thereof or by the use of nets, any fish in the bays, waters, harbours, creeks or arms of the sea within the boundaries of the town of Edgartown, excepting English herring, menhaden and mackerel: *provided, however*, that this act shall not have force or effect to restrain the taking of fish in the manner aforesaid, in any place more than one mile from the limits of said town, nor within the limits of the harbor of Holmes' Hole.

SECT. 2. *Be it further enacted*, That if any person or persons shall violate the provisions of this act, each person so offending, for each and every such offence, shall, on conviction thereof, pay a fine not exceeding ten dollars nor less than one dollar, if the quantity of fish so taken is less than one barrel, but if the quantity shall be one barrel or more, such person or persons so offending shall forfeit and pay for each and every barrel of fish so taken, the sum of five dollars.

SECT. 3. *Be it further enacted*, That all forfeitures and fines which shall be incurred by virtue of this act shall be recovered, the one half to the use of him or them who shall first sue for the same, and the other half to the use of the town of Edgartown, with legal costs of suit, by action of debt in any court proper to try the same.—[February 3, 1827.

AN ACT to unite the Watertown and Brighton Fisheries in Charles River, and for the Regulation and Management thereof,

[1797, p. 224; 1814, ch. 162; 1815, ch. 56.]

(Ch. 76.) SECT. 1. *Be it enacted*, That the several fisheries described in an act made and passed on the first day of March, in the year of our Lord one thousand eight hundred and fifteen, entitled "An Act to regulate the shad and alewife fishery in the town of Brighton," and an act made and passed the third day of February in the year of our Lord one thousand eight hundred and eighteen [*sixteen*], entitled "An Act to regulate the shad and alewife fishery in the town of Watertown," shall be united and hereafter constitute one fishery; and the right, franchise and property of said fisheries thus united shall belong to and be owned by said towns, in the proportions following, that is to say: seven tenth parts thereof by the town of Watertown, and three tenth parts thereof by the town of Brighton.

SECT. 2. *Be it further enacted*, That for the well ordering and good management of said fishery, there shall, as soon after the passing of this act as may be, and thereafter annually in the month of January, be appointed by the selectmen of the town of Watertown for the time being, three discreet and disinterested inhabitants of that town, and by the selectmen of Brighton two of their inhabitants of like character, who shall continue in office for the space of one year from the date of their appointment, and until others shall be appointed in their places, but subject to removal at any time by the respective selectmen of said towns, and they shall be denominated the fish-wardens of Charles River, and shall have power to use and occupy the said fishery by causing all such fish as pass into or are found in said river within the limits of said towns of Brighton and Watertown, to be taken at such times, in such manner, with such seines, nets, utensils and machinery, and by such persons, agents or servants as they may see fit to employ for that purpose; or they may lease and farm out by public or private sale, for one or more years, not exceeding five years in any one contract, the said fishery, entire or by parcels, as they may consider will be most advantageous for their respective towns; and each of said towns shall provide the same place or places where the fish have heretofore been taken on the margin of said river, within their respective limits, to be used at all times for landing and drawing the fish to shore, as occasion may require; but said fish-wardens shall not have the right or power of taking any of the fish called shad and alewives,

or to authorize any other person to take them on more than three days in any one week.

SECT. 3. *Be it further enacted*, That it shall be the duty of said fish-wardens immediately upon the receipt of any monies arising from the management, rent or sales of said fishery, after deducting therefrom such sums as they may have necessarily expended in conducting said business, to pay over the same to the respective treasurers of said towns, in the proportions aforesaid, taking their receipts for the same; and in the month of December annually, they shall make up their accounts, with a full and fair report of their proceedings in the premises, and deliver one set to the selectmen of each town, to be examined, allowed and passed by them; and the said fish-wardens shall be entitled to such compensation as their respective towns employing them may see fit to allow them; and the acts and doings of any three of said fish-wardens, when the whole have been notified, shall be binding and as valid in law as if all five had acted and concurred therein.

SECT. 4. *Be it further enacted*, That if any person shall cast or put into the waters of Charles River, within the limits of the towns of Watertown and Brighton, any seine, net or other machine or instrument whatever (other than a hook and line, as is commonly used for taking small fish), for the purpose or with a design to take or in any manner destroy any of the fish therein, or prevent their free passage up and down, along or across said river or any part thereof, without license first had from said fish-wardens, he or she so offending, shall forfeit and pay for each offence, a sum not less than twenty dollars nor more than forty dollars, according to the nature and aggravation of the offence.

SECT. 5. *Be it further enacted*, That if any person shall take, kill or destroy any fish within the limits of the said towns of Watertown and Brighton, without license from the fish-wardens of Charles River (except the taking them with hook and line as aforesaid), every person so offending shall forfeit and pay for every fish killed, taken or destroyed the sum of thirty cents.

SECT. 6. *Be it further enacted*, That all fines and forfeitures which may be incurred by any breach of this act, shall enure and be to the use of the respective towns of Watertown and Brighton, in the proportions herein before stated; that is to say, seven tenth parts thereof to the use of the town of Brighton, and shall and may be recovered on complaint before any justice of the peace, where the penalty does not exceed twenty dollars, or by indictment before the supreme judicial court or court of common pleas, or the same may be recovered by action of the case before any court proper to try the same, in a suit in the name of the fish-wardens of Charles River, for the uses aforesaid; and the death of any warden shall not be deemed an abatement of any suit or process, but the same may proceed to final judgment and execution in the name of said wardens.

SECT. 7. *Be it further enacted*, That all acts and parts of acts inconsistent with, or contravening any of the provisions of this act, be and the same are hereby repealed: *provided, however*, that the provisions of this act shall be always subject to the revision, control, amendment or repeal of the legislature.—[February 21, 1827.

AN ACT to prevent the Taking of Fish by seines or net in Congamon Ponds in Southwick

(Ch. 85.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person or persons to catch any fish with seines or nets, in the Congamon Ponds in Southwick, and if any person or persons shall catch any fish with a seine or net in the ponds aforesaid, he or they shall forfeit a sum not less than five dollars nor more than twenty dollars for each and every such offence, to be recovered by an action of debt to the use of him or them who shall sue for the same.—[February 23, 1827.

AN ACT to regulate the Fishery in Aggawam or Westfield River.

[1813, ch. 147. Additional Act, 1838, ch. 19.]

(Ch. 100.) SECT. 1. *Be it enacted*, That from and after the passing of this act, any person or persons who shall draw a seine or drag a net within thirty rods of the dam or race-way at White's Mills (so called), on Aggawam River, in the town of West Springfield, for the purpose of catching shad, alewives or other fish, shall for each and every such offence, forfeit and pay the sum of five dollars, and shall also forfeit the boat and seine employed for such purpose.

SECT. 2. *Be it further enacted*, That if any person or persons shall set any pot, nets, weir or hurdle, within thirty rods of said dam or race-way, for the purpose of taking fish of any kind, he or they shall for each and every such offence severally forfeit and pay the sum of five dollars for every twelve hours said pots, nets, weir or hurdle shall be placed in said river, and in proportion for a greater or less time.

SECT. 3. *Be it further enacted*, That if any person or persons shall in any other way obstruct the free passage of fish through said race-way, between the fifteenth day of April and the first day of June, he shall forfeit and pay for every such offence the sum of five dollars.

SECT. 4. *Be it further enacted*, That all the fines and forfeitures incurred by a breach of this act, may be recovered in an action of debt by any person who shall sue for the same before any justice of the peace within the county of Hampden.

SECT. 5. *Be it further enacted*, That all laws heretofore made regulating the fishery at White's Mills, on Aggawam River, be and the same are hereby repealed.—[March 3, 1827.

1828.

AN ACT further to regulate the Shad and Alewife Fishery in the Town of Malden.

[1815, ch. 43.]

(Ch. 129.) SECT. 1. *Be it enacted*, That from and after the passing of this act it shall and may be lawful for the inhabitants of the town of Malden in the county of Middlesex, at any legal meeting to be holden for that purpose, in each year, to sell at public auction the right and privilege of taking the fish called shad and alewives within the limits of said town, with one seine or drag-net only, on two of the days only in each week on which it is now lawful to take said fish in said town, and all monies aris-

ing from the sale of said right and privilege shall be paid into the treasury of said town, and be appropriated to the support of the poor thereof.

SECT. 2. *Be it further enacted*, That if the purchaser or purchasers of the said right and privilege, or those employed by them, shall presume to take any of the said fish with more than one seine or drag-net, on any other than two of the days in each week on which it is lawful to take said fish in said town, and if any other person or persons whatever shall at any time take any of the said fish with a seine or drag-net within the limits of said town, every person so offending shall, for each offence, forfeit and pay a sum not exceeding twenty dollars nor less than ten dollars, to be recovered by an action of debt in any court proper to try the same, one half to the use of said town of Malden, and the other half to him or them who shall sue for the same: *provided, however*, that nothing contained in this act shall be so construed as to prevent any inhabitant of said town from taking said fish with dip-nets as has been heretofore their custom.—[March 3, 1829.

1829.

AN ACT in addition to the Acts to prevent the Destruction, provide a Passage and regulate the Taking of Alewives and other Fish in Ipswich River.

[1787, ch. 58, v. 1, p. 191; 1792, ch. 88, v. 1, p. 451; 1776, ch. 66, v. 2, p. 128; 1804, ch. 90, v. 3, p. 524; 1805, ch. 29; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22; 1824, ch. 101; 1825, ch. 78.]

(Ch. 40.) SECT. 1. *Be it enacted*, That instead of the passage-ways now required by law for the fish to pass Warner's Dam and Farley's Dam in Ipswich, the owners of the said dams, their successors and assigns, shall make and keep in good repair, a fish-way at the northerly end of each of said dams, of the following dimensions and description: the said fish-ways shall be constructed of solid stone work, and shall form an inclined plane running down stream twenty feet, and shall be five feet wide at the bottom of the same; at the top of said ways there shall be an opening in the said dams of six feet in width, and not less than eight inches in depth below the top of the cap-piece of each of said dams, and the top of the said ways shall be on a level with the bottom of the said opening in said dams, and there shall be a curb of not less than eighteen inches in height on each side of the said ways, at the termination of which a channel shall be made of at least one foot in depth and five feet in width communicating with the channel of the river, and the said ways shall be kept open and in good repair at all times from the tenth day of April to the first day of June in each year.

SECT. 2. *Be it further enacted*, That each and every person who shall, from and after the tenth day of April to the first day of June, annually, take any of the fish called shad or alewives, in said river or in any part of the streams running into the same except on Monday and Wednesday of each week during said term, shall forfeit and pay for every such offence the sum of five dollars, to be recovered by action of debt in any court proper to try the same, to the sole use of him who may sue for said forfeiture.

SECT. 3. *Be it further enacted*, That so long as the owners of the said dams, their successors and assigns, shall keep open the said courses or passage-ways and in good repair, in manner as aforesaid, they shall not be subject to the penalties or restrictions provided in the first section of

an act passed March twenty-eighth, one thousand seven hundred and eighty-eight, entitled "An Act to prevent the destruction of alewives and other fish in Ipswich River, and to encourage the increase of the same." This act to be in force from and after the first day of July next.—[February 10, 1830.

AN ACT for the Preservation and Taking of Shad in Mattapoissett River in the Town of Rochester.

[1787, ch. 33, v. 1, p. 180; 1788, ch. 5, v. 1, p. 247; 1790, ch. 22, v. 1, p. 290; 1802, ch. 71, v. 3, p. 91; 1811, ch. 60; 1814, ch. 99; 1817, ch. 136.]

(Ch. 41.) SECT. 1. *Be it enacted*, That the penalties, remedies, provisions and laws, enacted and now in force, for the preservation of the fish called alewives in Mattapoissett River in Rochester, in the county of Plymouth, and for the regulating the taking the said fish in said river, be and the same are hereby extended to shad in said river and the ponds from which said river issues.—[February 10, 1830.

AN ACT to regulate the Passage-Way for Fish at the Dam across Taunton Great River, in the County of Bristol, at a place called King's Bridge.

[1815, ch. 119; 1819, ch. 133; 1822, chs. 38; 1832, ch. 44, 120.]

(Ch. 55.) SECT. 1. *Be it enacted*, That the proprietors of the mills and dam at King's bridge, on Taunton Great River, in the county of Bristol, shall construct and keep open at their said dam a convenient way for the passage of such fish as usually pass up the same river, in their proper season, which passage-way shall be of such dimensions and constructed and regulated in such manner as shall be prescribed and directed by the selectmen of the town of Bridgewater, in the county of Plymouth, or the major part of them, who are hereby appointed a committee for this purpose, in pursuance of the agreement of the said proprietors and the town of Middleborough, in the county of Plymouth, the said town of Middleborough being the only town interested in the fishery in said river above said dam; and the said selectmen of Bridgewater, or the major part of them, shall, from time to time, on the application of said town of Middleborough, or of said proprietors, and at the expense of said town of Middleborough, or of said proprietors, as the said selectmen of Bridgewater shall adjudge, repair to said dam and order and direct such alterations to be made in said fish-way, and in the regulation of the water, as to them shall appear to be proper, taking into consideration the interest of said proprietors as well as the importance of providing a convenient way for the passage of the fish; and all such alterations as may be ordered and directed as aforesaid shall be made by said proprietors within such time as said selectmen shall order.

SECT. 2. *Be it further enacted*, That so long as the said proprietors or owners of said mills and dam shall keep open during the proper season of the passing up of said fish a passage-way so constructed and regulated as aforesaid, they shall not, nor shall either of them, nor their tenants, nor the occupants of said mills and dam, be subject to the penalties of any act regulating the fishery in said river, nor to any action, prosecution or penalty under any law requiring a passage-way for the fish to be constructed and maintained at said dam.—[March 3, 1830.

AN ACT to prevent the Destruction of Trout in Russell Pond, in the Town of Russell.

(Ch. 74.) SECT. 1. *Be it enacted*, That any person who shall take or kill any trout in Russell Pond, in the town of Russell, at any time between the first day of October and the first day of January hereafter, shall forfeit and pay the sum of one dollar for each trout so killed or taken, to be recovered in an action of debt, in any court proper to try the same, in the name and to the use of the person who may first sue therefor.—[March 8, 1830.

AN ACT to prevent the Destruction of Fish by Seining in the Waters of Tisbury.

(Ch. 84.) SECT. 1. *Be it enacted*, That from and after the passing of this act it shall not be lawful for any person or persons to catch by seining thereof, or by the use of any nets (excepting dip-nets), any fish in the waters of the Lagoon and Chappaquansett ponds, in the town of Tisbury, or the creeks or shores adjoining said ponds, or Holmes' Hole harbor, excepting English herring, menhaden and mackerel: *provided*, that this act shall not have force or effect to restrain the taking of fish in the manner aforesaid, in any place more than one mile from the shores adjoining said pond, excepting Holmes' Hole harbor.

SECT. 2. *Be it further enacted*, That if any person or persons shall violate the provisions of this act, each person so offending shall forfeit and pay, on conviction thereof, for each and every such offence, a fine not exceeding ten dollars nor less than one dollar, if the quantity of fish so taken be less than one barrel; but if the quantity shall be one barrel or more, such person or persons so offending shall forfeit and pay for every barrel of fish so taken the sum of five dollars.

SECT. 3. *Be it further enacted*, That all fines and forfeitures which shall be incurred by virtue of this act shall be recovered in an action of debt, in any court proper to try the same, by any person who shall first sue therefor; one half thereof to the use of the complainant, the other to the use of Tisbury.—[March 8, 1830.

1831.

AN ACT to prevent the Destruction of Fish by *Cocculus Indicus* or other Poisonous Articles.*

(Ch. 43, General Laws.) SECT. 1. *Be it enacted*, That from and after the first day of April next, no person shall put, cast or throw into any of the waters of this Commonwealth, for the purpose of taking or destroying any fish being in any of said waters any of the *Cocculus Indicus* (otherwise called Indian Berry or Indian Cockle) or any other poisonous article, whether the same be mixed with any other substance or not, on pain that every person so offending shall forfeit and pay the sum of ten dollars for every such offence, to be recovered by complaint to any justice of the peace in the name and to the use of the Commonwealth, or by an action of debt before any such justice, in which case one moiety of said forfeiture shall enure to the use of the plaintiff and the other moiety thereof to the use of the Commonwealth.—[February 16, 1831.

* Repealed and reënacted in Revised Statutes and General Statutes.

AN ACT to incorporate the Skinnaquits Fishing Company, in Harwich and Chatham.

[Additional Act, 1837, ch 18.]

(Ch. 73.) SECT. 1. *Be it enacted*, That Sylvanus Eldridge, Kimball Eldridge, Amasa Nickerson, Levi Eldridge, Zephaniah Nickerson, Jonathan Small, Elijah Eldridge, Darius Weeks and James Long and their associates, successors and assigns, be and they are hereby incorporated and made a body politic, for the purpose of making the necessary improvements for the preservation and taking of fish called alewives, in Red River and Skinnaquits Stream in the towns of Harwich and Chatham. And it shall be lawful for said corporation to hold a meeting annually, on the first Tuesday of April,* for the purpose of choosing a clerk, treasurer, assessors and a collector; and three or more persons, being members of said corporation, to inspect, regulate, take care of and govern said fishery, who shall be sworn to the faithful discharge of their duty; and said committee shall have full power and authority to determine upon the rules and regulations to be observed in the taking of said fish, and to fix in what time and what places the same shall be taken and the prices that shall be paid therefor.

SECT. 2. *Be it further enacted*, That if any person shall take any of said fish from said river or stream within the said towns, at any time or place than such as shall be fixed by the committee aforesaid, every person so offending, shall for each and every such offence, on conviction thereof, pay a fine not exceeding five dollars nor less than two dollars, if the quantity so taken be less than one barrel; but if the quantity be more than one barrel, such person so offending shall forfeit and pay for each and every barrel of fish so taken five dollars, to be recovered in any court proper to try the same, for the use of the corporation.

SECT. 3. *Be it further enacted*, That if the committee aforesaid, or either of them, shall detect any person in attempting to take any of said fish at any other time or at any other place than such as shall have been fixed by said committee as aforesaid, or shall find such fish in the possession of any person, he shall be deemed to have taken said fish unlawfully and shall be subject to the penalties of this act as before mentioned; unless such person can make it appear on trial that he came by said fish in some other way, and the members of said corporation shall be competent witnesses in all cases where fish shall be unlawfully taken.

SECT. 4. *Be it further enacted*, That if any person, without the permission of the committee aforesaid, shall presume to take, catch or haul on shore any of said fish in said river or stream, or within one-fourth of a mile in any direction from the mouth of said river, he shall forfeit and pay a sum not exceeding seven dollars nor less than five dollars for each offence, to be recovered in the manner and to the use hereinafter provided.

SECT. 5. *Be it further enacted*, That the said committee shall, during the passage of said fish in said river or stream, cause all obstructions to their passage to and from the sea, of every description, to be removed, and if any damage shall be done to the property of individuals not members of the corporation, such individuals shall be entitled to reasonable damages therefor.

* Time of annual meeting altered, 1837, ch. 18.

SECT. 6. *Be it further enacted*, That said corporation, at any regular meeting thereof, shall have power to assess taxes equally, according to numbers, on all the members of said corporation, and they shall be liable for said assessments in their private and individual capacities.

SECT. 7. *Be it further enacted*, That the whole profits which may accrue to said corporation from said fishery, shall annually, in the month of November, be divided according to the number of the corporators.

SECT. 8. *Be it further enacted*, That Amasa Nickerson of said Harwich, he and he is hereby authorized to call the first meeting of said proprietors some time in September next, by giving personal notice thereof and the time and place at which said meeting shall be holden, and at said first meeting the mode of notifying subsequent meetings of the corporation shall be fixed and determined.

SECT. 9. *Be it further enacted*, That all persons who now are or may hereafter become owners of land adjoining said stream or river, shall have a right to become members of said corporation: *provided, however*, that they shall be subject to pay their proportional part of the expenses which shall have been before the time of their admission as members as aforesaid, incurred by said corporation.—[June 23, 1831.

1832.

AN ACT in addition to an Act to regulate the Fishery in Taunton Great River.

[1815, ch. 119; 1819, ch. 133; 1822, ch. 38; 1829, ch. 55. Additional Acts, 1832, ch. 120; 1843, ch. 73; 1854, ch. 22 of Resolves.]

(Ch. 44.) SECT. 1. *Be it enacted*, That from and after the passing of this act, any person or persons who shall have purchased or hereafter shall purchase any privilege or privileges of catching shad or alewives in Taunton Great River (the purchaser or purchasers of the privilege of the town of Somerset excepted), and who shall have selected and located or hereafter shall select and locate the place or places where he or they intend to use his or their seine or seines, net or nets, for the purpose of catching shad or alewives, and such place or places are or shall be in that part of the town of Berkley which is southerly of a line running due east from the mouth of the Segregansett River, so called, in the town of Dighton, shall have the right and it shall be lawful for any such person or persons to draw and sweep at such place and places, with a seine or seines, net or nets, thirty rods in length, and no more.

SECT. 2. *Be it further enacted*, That the purchaser or purchasers of any privilege or privileges of catching shad and alewives, as aforesaid, who shall have selected and located or hereafter shall select and locate the place or places where he or they intend to use his or their seine or seines, net or nets, for the purpose aforesaid, in that part of the town of Berkley which is southerly of a line drawn due east from the mouth of said Segregansett River, shall be subject to, and shall regulate and govern himself or themselves, in the use of such privilege or privileges, by all the provisions and requisitions of an act entitled "An Act to regulate the fishery in Taunton Great River," which passed on the twenty-first day of February in the year of our Lord one thousand eight hundred and twenty, except so far as the same are inconsistent with the provisions of this act.—[February 20, 1832.

AN ACT in addition to an Act to regulate the Fishery in Monatiquot River in the Town of Braintree.

[1817, ch. 151.]

(Ch. 54.) SECT. 1. *Be it enacted*, That the committee or the survivor or the survivors of them, in case of death of either, annually chosen by the inhabitants of said town of Braintree, pursuant to the provisions of the first section of said act, be and they are hereby fully authorized and empowered to prosecute, sue for and recover any and all penalties incurred by any breach or breaches of said act, before any court of record proper to try the same, and that all fines and penalties recovered by such committee, suing as such, or by the survivor or survivors of them, shall be and enure to the sole use of the said inhabitants of said town of Braintree.—[February 25, 1832.

AN ACT in addition to "An Act further regulating the Fishery in the Merrimack River and the Streams running into the same."

[1819, ch. 20; 1820, chs. 22, 70; 1822, ch. 75. Additional Act, 1856, ch. 289.]

(Ch. 56.) SECT. 1. *Be it enacted*, That the fourth and fifth sections of an act entitled "An Act further regulating the fishery in the Merrimack River, and the streams running into the same," passed the eighteenth day of June in the year of our Lord one thousand eight hundred and nineteen, be and the same are hereby repealed: *provided, however*, that the said sections shall be in full force as to any prosecutions commenced for a breach of the same.

SECT. 2. *Be it further enacted*, That instead of the penalty contained in the third section of the act to which this is in addition, the person or persons offending against the same shall for such offence forfeit and pay a sum not exceeding twenty dollars nor less than five dollars, to be recovered on complaint made to any justice of the peace for the county where said offence shall be committed; one half to the use of the town where the offence shall be committed, and the other half to the use of the person or persons who may prosecute for the same.—[February 25, 1832.

AN ACT in further addition to an Act regulating the Fishery in Taunton Great River.

[1815, ch. 119; 1819, ch. 133; 1822, ch. 38; 1829, ch. 55; 1832, ch. 44; 1843, ch. 73; 1854, ch. 22 of Resolves.]

(Ch. 120.) SECT. 1. *Be it enacted*, That from and after the passing of this act, it shall not be lawful for any person or persons to catch or destroy shad or alewives with scoop nets or with any other instrument or by any other means whatsoever, within one hundred rods of the dam across Taunton Great River, near Kingsbridge.

SECT. 2. *Be it further enacted*, That if any person or persons shall at any time catch or destroy shad or alewives at or within the distance of one hundred rods from said dam, he or they shall forfeit and pay a sum not exceeding twenty dollars nor less than five dollars, for every such offence, to be recovered by indictment, complaint or action of debt, in any court proper to try the same, to the use of him who shall prosecute and sue for the same: *provided, however*, that the penalty herein provided shall not be construed to apply to fishing with or setting a seine within that distance of

said dam, for which a different penalty is by law provided.—[March 18, 1832.

1833.

AN ACT in addition to the several Acts concerning the Fishery in Newmasket River.

[1764, v. 3, p. 20, appendix; 1791, ch. 19, v. 1, p. 313; 1797, ch. 41, v. 2, p. 192; 1801, ch. 25, v. 2, p. 469; 1815, ch. 111; 1819, ch. 137.]

(Ch. 137.) SECT. 1. *Be it enacted*, That Peter H. Pierce and Horatio G. Wood, their heirs and assigns, be and they are hereby authorized to keep up and maintain their dam across the Newmasket River, in the town of Middleborough, near the Old Stone Weir, so called, upon the condition that the aforesaid Peter H. Pierce and Horatio G. Wood, their heirs and assigns, make, or cause to be made a good and sufficient passage-way for the fish called alewives passing up said river, and keep the said passage-way open during the time required by laws regulating the fisheries on said Newmasket River; and upon the further condition that the said Peter H. Pierce and Horatio G. Wood, and their heirs and assigns, at their own expense, and free from any expense to said town, and to their acceptance, provide a suitable place at or near their said dam where said fish may be conveniently taken, and the said fish-way, and the privilege of passing to and from the same to the highway, shall be secured to the inhabitants of the town of Middleborough.

SECT. 2. *Be it further enacted*, That from and after the location of such new fishing place as aforesaid, it shall be lawful for the inhabitants of said town to take said fish at such new fishing place, and to dispose of the same in the manner provided by law for taking and selling the same at the Old Stone Weir, as aforesaid.—[March 20, 1833.

AN ACT to preserve the Eel Fishery at Muskeeket Island, within the Town of Nantucket.

(Ch. 211.) SECT. 1. *Be it enacted*, That from and after the first day of September next it shall not be lawful for any person to take from the creeks, coves or harbors on the island of Muskeeket, within the town of Nantucket, a greater number of eels at one time than three dozen, without a permit from a major part of the selectmen of said town; every person offending as aforesaid shall forfeit and pay for each and every additional dozen so taken the sum of fifty cents.

SECT. 2. *Be it further enacted*, That if any boat or craft shall be found within the limits aforesaid with any more eels on board than this act allows to be taken by permit from the selectmen aforesaid, it shall be the duty of such person or persons as shall be chosen by the said town of Nantucket to see to the execution of this law, to seize on such boat or craft and detain the same not exceeding forty-eight hours, in order that the same be attached or arrested by due process of law and made answerable for said fines and forfeitures, with costs of suit: *provided, however*, that as soon as the master or owner of such boat or craft shall pay such fines and forfeitures to the treasurer, if he shall pay the same before being sued, such boat or craft shall be discharged with the effects therein.

SECT. 3. *Be it further enacted*, That the said town of Nantucket are hereby authorized to choose annually such number of fish-wardens as they

may judge necessary, who shall be sworn to the faithful discharge of their duty, whose duty it shall be to prosecute for all offences against this act; and all fines and forfeitures that shall be incurred by virtue thereof, shall be one half to him or them who shall sue for the same, and the other half to the use of said town of Nantucket; and the same shall be recovered, with legal costs of suit, by an action of debt, in any court proper to try the same.—[March 28, 1833.]

1834.

AN ACT to repeal all Laws heretofore made for regulating the Alewife Fishery in a certain Stream in the Towns of Dracut and Methuen.

(Ch. 117.) SECT. 1. *Be it enacted*, That all laws heretofore made regulating the alewife fishery in a certain stream which flows from Peter's Pond, in Dracut, in the county of Middlesex, and Methuen in the county of Essex, into Merrimack River, running through Bartlett's farm, and on which are situated Bartlett's Mills in Methuen, and Richardson's Mills in Dracut, or that require any passage-way for said fish through or around any dams across said stream are hereby repealed.—[March 25, 1834.]

AN ACT concerning Alewives in Herring River, in the Town of Sandwich.

[Additional Acts, 1853, ch. 95; 1854, ch. 285.]

(Ch. 126.) SECT. 1. *Be it enacted*, That the selectmen of the town of Sandwich for the time being, or a major part of them, are hereby empowered, in the month of March or April annually, to prescribe the time, place or places, and manner of taking alewives in Herring River, in the town of Sandwich, such time not to exceed four days in a week; and they shall appoint some suitable person or persons to take the same, and fix the compensation to be paid therefor.

SECT. 2. *Be it further enacted*, That the owners or occupants of dams across said river shall annually, during such time, not exceeding sixty days in each year, as shall be prescribed by the selectmen of said town, or the major part of them, for the time being, keep constantly open and maintain through, over or around their respective dams, a passage sufficient and proper for the passage of said fish, to the satisfaction of said selectmen, under a penalty not less than ten nor more than sixty dollars for each and every twenty-four hours they shall neglect to open a passage-way as aforesaid; and the said selectmen shall, thirty days at least before the commencement of said period, notify in writing the owners or occupants of said dams of the time when the said passage-ways shall be opened, and the manner in which they shall be constructed and regulated: *provided, however*, that if any owner or occupant shall at any time be dissatisfied with the determination of said selectmen in relation to the construction or regulation of such passage-way or passage-ways, such owner or occupant may, by application in writing to the selectmen of the town of Barnstable for the time being, in said county of Barnstable, who are hereby constituted a committee for that purpose, cause such passage-way or passage-ways to be fixed, prescribed and regulated in writing by said committee; and such passage-way or passage-ways shall be, by the owners or occupants of said dam or dams, kept open and regulated in width and depth, and in all other

respects pursuant to said written determination of said committee, under the same penalty as is herein before provided; and the expense of said committee shall be paid by the owners or occupants of said dam or dams, or by the said town of Sandwich, as said committee shall adjudge.

SECT. 3. *Be it further enacted*, That the said selectmen of the town of Sandwich shall have full power and authority to cause the natural course of the stream through which said fish pass to be kept open and free of obstructions, except the dams aforesaid, and to remove all such obstructions, except as aforesaid; and for that purpose as well as for the other purposes of this act, shall have authority to go upon the land or meadow of any person through which said stream runs, without being deemed trespassers; and if any person or persons shall molest the said selectmen, or either of them, in the execution of his or their duties under this act, or shall obstruct the passage of said fish, except as aforesaid, the person or persons so offending shall, on conviction thereof, before any justice of the peace in the county of Barnstable, pay a fine for every such offence, not exceeding twenty nor less than ten dollars.

SECT. 4. *Be it further enacted*, That if any person or persons shall take any of the fish aforesaid in said river, or in the ponds in which said fish cast their spawn, at any time, or in any place or manner other than shall be allowed by said selectmen as aforesaid, each person so offending shall for each and every such offence, on conviction thereof, pay a fine not exceeding twenty dollars nor less than one dollar.

SECT. 5. *Be it further enacted*, That from and after the passing of this act, the inhabitants of said town at their annual March meeting, shall determine the quantity of said fish that each family in said town shall receive, and establish the price they shall pay therefor.

SECT. 6. *Be it further enacted*, That all persons not otherwise disqualified, shall be taken to be competent and legal witnesses in any prosecution upon this act, they being inhabitants of said town of Sandwich notwithstanding.

SECT. 7. *Be it further enacted*, That all the forfeitures incurred by virtue of this act, shall be two-thirds to the use of the said town of Sandwich, and one-third to the person or persons giving information, to be recovered in an action of debt, in any court proper to try the same, to be brought by the treasurer thereof.

SECT. 8. *Be it further enacted*, That the Herring Pond Indians shall be allowed the same privileges in relation to said fish, as have heretofore been usually granted them by said town of Sandwich.—[March 27, 1834.

1835.

AN ACT concerning the Proprietors of Mills on Concord River.

[1789, ch. 51, v. 1, p. 276; 1797, ch. 68, v. 2, p. 213; 1808, ch. 94.]

(Ch. 89.) SECT. 1. *Be it enacted*, That all laws heretofore passed to prevent obstructions to the passage of fish, and all laws obliging the proprietors of mills to leave a passage in their dams for said fish, be and they are hereby repealed, so far as they relate to or affect the proprietors of mills on the Concord River.—[March 30, 1835.

AN ACT to repeal "An Act to regulate the Taking of Fish in Connecticut River."

[1812, ch. 103. Additional Act, 1852, ch. 122.]

(Ch. 137.) **SECT. 1.** *Be it enacted*, That a statute of the year one thousand eight hundred and twelve, chapter one hundred and three, entitled "An Act to regulate the taking of fish in Connecticut River," be and the same is hereby repealed.—[April 8, 1835.

1836.

AN ACT to regulate the Alewife Fishery in the Town of Wellfleet.

[1788, ch. 14, v. 1, p. 200. Additional Act, 1865, ch. 85.]

(Ch. 56.) **SECT. 1.** *Be it enacted*, The selectmen of the town of Wellfleet for the time being, may, in the month of March or April annually, prescribe the time, place or places and manner of taking alewives in the creeks and brooks in the town of Wellfleet, such time not to exceed four days in a week; and they may appoint some suitable person to take the same, or they may sell the right to take said fish as they think best, and shall fix the compensation therefor.

SECT. 2. *Be it further enacted*, Said selectmen may cause the natural courses of the streams through which said fish pass, to be kept open and free of obstructions, and for that purpose, as well as for other purposes of this act, may go upon the land or meadow of any person through which said streams run, without being deemed trespassers, and if any person molest the said selectmen or either of them in the execution of his or their duties under this act, or shall obstruct the passage of said fish, the person so offending shall forfeit and pay a fine for every offence not exceeding twenty nor less than ten dollars upon conviction thereof, before any justice of the peace for the county of Barnstable, not an inhabitant of said town of Wellfleet.

SECT. 3. *Be it further enacted*, If any person shall take any of the fish aforesaid in the creeks or brooks or ponds in which said fish cast their spawn, at any time or in any place or manner other than shall be allowed by said selectmen as aforesaid, each person so offending, for each and every offence, on conviction thereof, shall pay a fine not exceeding twenty dollars.

SECT. 4. *Be it further enacted*, The inhabitants of said town at their annual meeting, shall determine the quantity of said fish, each family in said town shall receive, and establish the price they shall pay therefor.

SECT. 5. *Be it further enacted*, All persons not otherwise disqualified, shall be taken to be competent and legal witnesses in any prosecution upon this act, they being inhabitants of said town of Wellfleet notwithstanding.

SECT. 6. *Be it further enacted*, All the forfeitures incurred by virtue of this act, shall be two-thirds to said town of Wellfleet, and one-third to the person or persons giving information, to be recovered in an action of debt in any court proper to try the same, to be brought by the treasurer thereof.

SECT. 7. *Be it further enacted*, All laws heretofore made regulating the alewife fishery in the said town of Wellfleet are hereby repealed.—[March 23, 1836.

AN ACT to regulate the Fishery in Palmer's River.

[1803, ch. 116, v. 3, p. 373; 1819, ch. 11; 1820, ch. 51. Additional Act, 1837, ch. 184.]

(Ch. 130.) SECT. 1. *Be it enacted*, From and after the passing of this act, no person, except as is hereinafter provided, shall take shad or alewives in seines or with nets, in Palmer's River, in the town of Swansea, in the county of Bristol, from the first day of April to the twentieth day of June, in each year: *provided*, that the inhabitants of Swansea may, at a legal meeting held for that purpose, dispose of the privilege at public auction, of taking shad and alewives with seines only, in said river, for the time aforesaid, to such persons as may offer the highest price for the same, and shall give sufficient security for the payment of the purchase money, at such time and in such manner as the town shall order.

SECT. 2. *Be it further enacted*, The town of Swansea may have two seines only, and each seine may have the privilege of sweeping three days, in the daytime only, in each week, beginning on Monday at sunrise and ending at sunset on Wednesday, and may sweep in any part of the river aforesaid, between Rhode Island line and Rehoboth line on said river.

SECT. 3. *Be it further enacted*, The town of Swansea at their annual meeting in March or April, may choose one or more suitable persons to serve as fish-wardens, who when sworn, shall see this act enforced and may prosecute for all violations thereof.

SECT. 4. *Be it further enacted*, If any person shall sweep with any seine or net at any time, place or manner other than as before mentioned, or shall set any seine, net, weare or other obstruction in said river or in any part thereof, with the intent to take or destroy any shad or alewives, he shall forfeit and pay fifty dollars for each offence, to be recovered to the use of the county in which the offence was committed, or by action of debt, one half to the use of the person prosecuting for the same and the other half to the use of the town in which the offence shall be committed.

SECT. 5. *Be it further enacted*, All laws heretofore passed relating to the fishery in Palmer's River in Swansea, are hereby repealed.—[April 4, 1836.]

AN ACT further to regulate the Fisheries in Mystic River.

[1788, ch. 68, v. 1, p. 238; 1793, ch. 66, v. 1, p. 512; 1802, ch. 78, v. 3, p. 98; 1815, ch. 54; 1820, ch. 67. Additional Act, 1845, ch. 149.]

(Ch. 158.) SECT. 1. *Be it enacted*, The inhabitants of the town of Medford may hereafter take shad and alewives in the Mystic River, on the flood as well as on the ebb tide, on Wednesday of each week, between the first day of March and the last day of June, inclusive, anything in the "act of February fourteenth, in the year eighteen hundred and twenty-one," for the regulation of the shad and alewife fishery in Cambridge, Charlestown, Medford and West Cambridge to the contrary notwithstanding.—[April 8, 1836.]

AN ACT to incorporate the Andrews Fishing Company in Harwich.

[Additional Act, 1841, ch. 57.]

(Ch. 177.) SECT. 1. *Be it enacted*, Elijah Small, Obed Brooks, Alvan Walker, their associates and successors, are hereby made a corporation by the name of the Andrews Fishing Company, in Harwich, for the purpose

of making the necessary improvement for the preservation and taking of the fish called alewives in Andrews River in said Harwich, and for that purpose shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes, passed on the fourth day of November in the year one thousand eight hundred and thirty-five.

SECT. 2. *Be it further enacted*, If any person, without the permission of the corporation, shall take, catch or haul on shore any of said fish in said river or the pond from which said river issues, or within one-fourth of a mile, in any direction, from the mouth of said river, he shall forfeit and pay a fine, not exceeding five dollars for each offence if the quantity so taken be less than one barrel; but if the quantity be more than one barrel such person so offending shall forfeit and pay for each barrel of fish so taken, five dollars, for the use of said corporation, to be recovered in any court proper to try the same; nor shall said corporation haul on shore any fish within one-fourth of a mile from the mouth of said river, under the penalty of twenty-five dollars for each offence.

SECT. 3. *Be it further enacted*, Said corporation may, at their own expense, make a free passage for said fish into the mill-pond at the head of said river, for the space of fifteen days, annually, in the month of April or May: *provided*, they do not injure the owner of the dam now erected upon said river.

SECT. 4. *Be it further enacted*, If any damage shall be done by said corporation to the property of any individual not a member of the corporation, such individual shall be entitled to reasonable damage therefor.

SECT. 5. *Be it further enacted*, All persons who are now or shall hereafter be owners of land adjoining said river, may become members of said corporation, subject, however, to pay their proportional part of the expenses which shall have been incurred by said corporation before the time of their admission.—[April 9, 1836.

AN ACT further regulating the Alewife Fishery in Weymouth.

[1800, ch. 73, v. 2, p. 434; 1825, ch. 48. Additional Act, 1846, ch. 92.]

(Ch. 198.) SECT. 1. *Be it enacted*, The right of taking the fish called alewives in the town of Weymouth and which right is now limited, by an act passed March the seventh, in the year one thousand eight hundred and one, to Mondays, Wednesdays and Fridays, shall hereafter, under the limitations and restrictions of the said act, be extended to Saturdays also.—[April 9, 1836.

AN ACT to incorporate the Orleans Fishing Company.

(Ch. 205.) SECT. 1. *Be it enacted*, Nathan Rogers, James Higgins, Samuel Eldridge, their associates and successors, are made a corporation by the name of the Orleans Fishing Company, in Orleans, and are empowered to open the brook running from Hester's Pond, so called, to Pleasant Bay in said Orleans, so far as is necessary for the purpose of an alewife fishery, and to regulate the same; and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities contained in the forty-fourth chapter of the Revised Statutes, passed on the fourth day of November, one thousand eight hundred and thirty-five.

SECT. 2. *Be it further enacted*, If any person without the permission of the corporation, shall take, catch or haul on shore any alewives in said brook or pond, or within one-eighth of a mile in any direction from the mouth of said brook, he shall forfeit and pay, for the use of said corporation, a sum not exceeding two dollars if the quantity so taken be less than one barrel; but if the quantity taken be more than one barrel the person so offending shall forfeit and pay for each barrel of fish so taken, five dollars, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, If any damage shall be done by said corporation to the property of any individual not a member of said corporation, such individual shall be entitled to reasonable damage.

SECT. 4. *Be it further enacted*, All persons who now are or may hereafter be owners of land adjoining said brook may become members of said corporation, subject, however, to their proportional part of the expenses which may have been incurred by said corporation before the time of their admission.

SECT. 5. *Be it further enacted*, Any member of this corporation who shall take or catch, by seine or otherwise, any alewives within the limits mentioned in the second section of this act, except in the brook or pond aforesaid, shall incur the penalty provided for in said section, to be recovered in the manner therein set forth.—[April 11, 1836.

AN ACT in relation to the Alewife Fishery in Wewantit River.

[1797, ch. 69, v. 2, p. 214; 1819, ch. 118.]

(Ch. 218.) SECT. 1. *Be it enacted*, All the provisions of the several laws relating to the fish called alewives in Wewantit River, and the fishery connected with said river, so far as any duties are required of or any liabilities are imposed on the inhabitants of the town of Rochester in the county of Plymouth, are hereby repealed.

SECT. 2. *Be it further enacted*, All the rights and privileges by law conferred on the inhabitants of the said town of Rochester to the fishery of said river and the proceeds thereof, are hereby conferred on Joshua B. Tobey, his heirs and assigns, and he and they are required, in the fall of each successive year hereafter, to appoint three suitable persons as members of the committee for said river, who shall be required to perform the same duties and are vested with the same authority as the committee of the town of Rochester now are, and the said Tobey, his heirs and assigns, shall be subject to the same pecuniary liabilities as the inhabitants of Rochester now are.—[April 13, 1836.

1837.

AN ACT in addition to an Act to incorporate the Skinnaquits Fishing Company in Harwich and Chatham.

[1831, ch. 73. Additional Act, 1841, ch. 61.]

(Ch. 18.) SECT. 1. *Be it enacted*, The time of holding the annual meeting of the Skinnaquits Fishing Company in Harwich and Chatham, shall be on the first Tuesday in March instead of the first Tuesday in April, as provided in the act to incorporate said company.—[February 22, 1837.

AN ACT to incorporate the Fish Wear Company.

(Ch. 92.) SECT. 1. *Be it enacted*, John Kendrick, Isaac Linnell, Josiah Linnell, their associates and successors, are hereby made a corporation by the name of the Fish Wear Company, for the purpose of constructing a fish wear in the waters at Nanwicoit Point, so called, in the southeasterly part of the town of Orleans, in the county of Barnstable, for the purpose of taking fish; and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities contained in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, Said wear shall not extend farther into the water than to the depth of four feet at low water.

SECT. 3. *Be it further enacted*, If any person shall take any fish from said wear without the permission of said corporation, he shall forfeit to said corporation a sum not exceeding five dollars, if the quantity so taken be less than one hundred pounds, but if the quantity taken be more than one hundred pounds, the person so offending shall forfeit five dollars for every hundred pounds of fish so taken, to be recovered in any court proper to try the same.

SECT. 4. *Be it further enacted*, If any person shall take by seine any fish within twenty rods of the location of said wear, he shall forfeit a sum not exceeding six dollars for each offence, for the use of said corporation, to be recovered as aforesaid.—[March 25, 1837.]

AN ACT to incorporate the North Falmouth Fishing Company.

(Ch. 118.) SECT. 1. *Be it enacted*, Ebenezer Nye, Prince Nye and Benjamin Nye, their associates and successors, are hereby made a corporation by the name of the North Falmouth Fishing Company, in North Falmouth, and are empowered to regulate the brook running from Nye's Pond, so called, to Cautomot Harbor in said Falmouth, so far as is necessary, for the purpose of an alewife fishery; and for this purpose shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person, without the permission of the corporation, shall take, catch, or haul on shore any alewives in said brook, or within one-eighth of a mile in any direction from the mouth of said brook, he shall forfeit and pay for the use of said corporation a sum not exceeding two dollars, if the quantity so taken be less than one barrel; but if the quantity taken be more than one barrel, the person so offending shall forfeit and pay for each barrel of fish so taken, five dollars, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, If any damage shall be done by said corporation to the property of any individual not a member of the corporation, such individual shall be entitled to reasonable damage, to be estimated in the same manner as damages occasioned by the laying out of highways.—[April 7, 1837.]

AN ACT to further regulate the Fishery in Dennis.

[1814, ch. 134; 1815, ch. 83. Additional Acts, 1849, ch. 37; 1850, ch. 148.]

(Ch. 135.) SECT. 1. *Be it enacted*, The committee chosen by the inhabitants of the town of Dennis, at their annual meeting to regulate the

fishery in said town, shall, in addition to their duties now by law prescribed, appoint all such suitable persons as make application, being inhabitants of said Dennis, to catch alewives in said town, and fix the compensation to be paid therefor.

SECT. 2. *Be it further enacted*, The inhabitants of said town, at their annual meeting, shall determine the quantity of said fish each family in said town shall receive, and establish the price they shall pay therefor.—[April 12, 1837.

AN ACT to incorporate the Rock Harbor Fishing Company in Orleans.

(Ch. 159.) SECT. 1. *Be it enacted*, Richard Sparrow, Ira Mayo and Timothy Smith, their associates and successors, are hereby made a corporation by the name of the Rock Harbor Fishing Company in Orleans, in the county of Barnstable, and are empowered to open the stream running from Tan Pond, so called, to the mouth of Rock Harbor in said Orleans, so far as is necessary, for the purpose of an alewife fishery, and to regulate the same; and also to erect a fish-wear on the north side of Nanwicoit River in said Orleans, in Meeting-house Pond, so called, where said river and pond adjoin the land of Isaac Doane; and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person, without the permission of the corporation, shall take, catch or haul on shore any alewives in said Tan Pond or stream, he shall forfeit and pay, for the use of said corporation, a sum not exceeding two dollars, if the quantity so taken be less than one barrel; but if the quantity be more than one barrel, the person so offending shall forfeit and pay for each barrel of fish so taken, five dollars; or if any person shall take any fish from said wear, without permission of said corporation, he shall forfeit and pay a fine not exceeding five dollars, if the quantity so taken be less than one hundred pounds, but if the quantity so taken exceed one hundred pounds, he shall forfeit and pay five dollars for every hundred pounds so taken, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, If any damage shall be done by said corporation to the property of any individual, not a member of said corporation, such individual shall be entitled to reasonable damage, to be estimated in the same manner as damages happening in the laying out of highways.

SECT. 4. *Be it further enacted*, If said corporation shall, in the prosecution of their work, cross any highway, they shall do it in such a manner as shall not unreasonably incommode the travel on said way, and shall leave said way in as good repair as it was before the alteration or crossing of the same.

SECT. 5. *Be it further enacted*, All persons who now are or shall hereafter be owners of land adjoining said Tan Pond and stream running therefrom to the mouth of Rock Harbor, may become members of said corporation, subject, however, to pay their proportional part of the expenses which shall have been incurred by said corporation before the time of their admission.—[April 13, 1837.

AN ACT to regulate the Weight of Fish.

(Ch. 166.) SECT. 1. *Be it enacted*, When fish are sold by the quintal, it shall be understood to mean a quintal of one hundred pounds avoirdupois, and all contracts concerning fish sold in this manner shall be understood and construed accordingly.—[April 14, 1837.]

AN ACT further regulating the Fishery in Palmer River in Rehoboth.

[1803, ch. 116, p. 378; 1819, ch. 11; 1820, ch. 51; 1836, ch. 130. Additional Act, 1844, ch. 63, repealing all laws relating to Fishing in Palmer River in Rehoboth.]

(Ch. 184.) SECT. 1. *Be it enacted*, If any person shall make or cause to be made, or shall continue any wear in Palmer River, in the town of Rehoboth, in the county of Bristol, up stream from the land now belonging to Royal Horton, situate on the westerly side of said river, he shall forfeit and pay fifteen dollars for each offence.

SECT. 2. *Be it further enacted*, All forfeitures named in this act or in either of the acts to which this is in addition, may be recovered either by indictment for the use of said county, or otherwise, as now provided by law.

SECT. 3. *Be it further enacted*, All acts and parts of acts regulating the fishery in said town, inconsistent with this act, are hereby repealed.

SECT. 4. *Be it further enacted*, This act shall take effect from and after the passage of the same.—[April 18, 1837.]

AN ACT to authorize Abraham Hobart to erect a Dam across Monatiquot River in the Town of Braintree.

(Ch. 189.) SECT. 1. *Be it enacted*, Abraham Hobart, of Braintree, his heirs or assigns, are hereby authorized to erect a mill-dam across Monatiquot River, in said town, three or four rods below where his present dam is now located, to be raised no higher than the tide usually flows, with a sufficient passage or sluice-way therein, for the passage of such vessels, boats or rafts as may have occasion to go up and down said river, of at least twenty-four feet in width, with good and sufficient sluice-gates, to be constructed with paddle-gates therein, of two feet square: *provided, however*, that the mud-sill upon which said sluice-gates are placed, shall not rise more than twelve inches above the bed of the river and that said sluice-gates shall at all times be opened by said Hobart, his heirs or assigns, when it is practicable so to do, for the passage of vessels, boats or rafts up and down said river; and *provided, further*, that at all times during the continuance of said dam, there shall be kept up and maintained upon the water privilege created by said dam, a grist-mill in which shall be ground all kinds of grain, and that there shall be maintained in said dam, a sufficient passage-way for the herring and other fish to pass up said river: and *provided, further*, that nothing herein contained shall authorize said Hobart, his heirs or assigns, to appropriate for said dam and privilege, the property or lands of others, except in the manner now provided by law. And that said dam shall be erected within three years from and after the passage of this act.—[April 18, 1837.]

AN ACT to regulate the Alewife Fishery in Middleborough.

[1801, ch. 65, v. 2, p. 516; 1808, ch. 78; 1815, ch. 111; 1819, ch. 137.]

(Ch. 193.) **SECT. 1.** *Be it enacted*, The inhabitants of the town of Middleborough, in the county of Plymouth may, at any meeting called for that purpose, dispose of their right of taking alewives in said town by contract or by sale at public auction, for a term not exceeding five years, on any one contract or sale; or said town may improve their right aforesaid, by choosing agents to take said alewives, and dispose of the same as the town may from time to time direct.

SECT. 2. *Be it further enacted*, All acts and parts of acts regulating the fishery in said town, inconsistent with this act, are hereby repealed.

SECT. 3. *Be it further enacted*, This act shall take effect from and after the passage thereof.—[April 18, 1837.]

AN ACT to regulate the Fishery in Newbury.

[April 26, 1771, v. 3, p. 21, appendix; 1792, p. 408; 1796, p. 117; 1805, ch. 76; 1808, ch. 91; 1812, ch. 106. Amended, 1859, ch. 54.]

(Ch. 195.) **SECT. 1.** *Be it enacted*, The inhabitants of the town of Newbury, in the county of Essex, may, at any legal meeting called for that purpose, regulate the taking the several kinds of fish in Parker River and other streams within said town, or dispose of the privileges of taking the same to their own use and benefit, in any manner they may think proper, and shall choose by ballot, a committee consisting of three discreet persons, who shall cause the regulations adopted by said town to be carried into effect, who shall be sworn to the faithful performance of their duty.

SECT. 2. *Be it further enacted*, The selectmen for the time being shall post up in three or more public places in said town, the regulations established by said town respecting the fishery in the river and streams aforesaid.

SECT. 3. *Be it further enacted*, If any person shall take any fish in said river and streams at any time or in any place or manner, other than shall be allowed by said town as aforesaid, he shall for each offence, on conviction thereof, pay a fine not exceeding five dollars, to be recovered in any court proper to try the same, to the use of him who shall prosecute for the same: *provided, however*, that nothing contained in this act shall be so construed as to prohibit any inhabitant of the town of Rowley, from taking fish in that part of the branch of Parker River called Mill River, which constitutes in part the dividing line between the towns of Newbury and Rowley.

SECT. 4. *Be it further enacted*, All acts and parts of acts inconsistent with the provisions of this act, are hereby repealed.—[April 18, 1837.]

1838.

AN ACT to regulate the Fishery in the Agawam and Half-way Pond Rivers.

[1798, p. 255. Additional Act, 1844, ch. 65.]

(Ch. 19.) **SECT. 1.** *Be it enacted*, The towns of Plymouth and Wareham shall annually, at their meetings in the month of November, respectively, choose by ballot a committee of not more than three persons each, who shall be sworn to the faithful discharge of their duties, in the manner of other town officers; which committee shall in the month of

March, annually, after a public notice of at least ten days, sell by public vendue the privilege of taking the fish called alewives and shad in the Agawam and Half-way Pond Rivers, in the county of Plymouth, at such places not exceeding two in said towns, and on such days, not exceeding three in each week, as said committee shall agree upon and publish in their notice of sale; they shall also express in said notice the manner of taking and disposing of said fish, and the price at which the purchasers may sell them, which price shall not exceed twenty-five cents a hundred for alewives and four cents each for shad: *provided, nevertheless*, that said committee may fix upon one place in the town of Wareham, and one day in each week, for taking shad different from the place and day of the week appointed for taking alewives.

SECT. 2. *Be it further enacted*, The committee of the town of Plymouth, the first year after the passage of this act, and the committee of the town of Wareham the second year, and so on alternately forever, shall notify the town clerk of the other town concerned in said fishery, of the time and place in which said committees shall meet, ten days at least before the time of meeting; and the members of the committee present at said meeting shall constitute a quorum for doing business.

SECT. 3. *Be it further enacted*, If either of said towns shall neglect to choose its committee as aforesaid, or if the committee of either town shall neglect to give notice, as above required, to the other, said town shall forfeit and pay to the use of the other which shall choose such committee or whose committee shall give said notice, for each neglect, the sum of one hundred dollars.

SECT. 4. *Be it further enacted*, All persons except the purchasers as aforesaid, or those employed by them, who shall take any of said fish in said rivers or in any pond or stream having communication therewith, between the first day of April and the first day of June, both inclusive, in each year, shall forfeit and pay not more than twenty dollars for each and every offence.

SECT. 5. *Be it further enacted*, The owner or occupier of any dam on said rivers shall annually, between the first day of April and first day of June next following, for such term of time and in such manner as said committee shall direct, open a sufficient passage for said fish through said dam; and on failure of opening such passage or of continuing the same open as aforesaid, shall forfeit and pay the sum of one hundred dollars; and said committee may open such dam when neglected as aforesaid, at the expense of the proprietor thereof: *provided*, no more damage is thereby done the owner than is necessary to effect said purpose.

SECT. 6. *Be it further enacted*, If any person shall make any wear or cause any other obstruction to the free passage of said fish up said rivers, or shall take any of said fish, or shall make use of any seine to take said fish in said rivers or in any pond or stream communicating with the same, in any other manner or at any other time or place than such as may be approved and established by said committee, between the first day of April and first day of June as aforesaid, he shall forfeit and pay not more than twenty dollars for each and every offence; and said committee shall remove such wear or obstruction at the expense of the person causing the same, and also seize, to the use and disposal of said towns, any seine

used as aforesaid, and make complaint to the town treasurer of either of the towns aforesaid, of any violation of this act that shall come to their knowledge.

SECT. 7. *Be it further enacted*, The treasurers of the aforesaid towns respectively, may, upon any complaint of any member of the committees sue for the recovery of any forfeitures incurred by a breach of any of the regulations provided in this act, and also of any such further regulations as may be provided and established by said committees, in conformity to this act; and all fines and forfeitures recovered for any breaches aforesaid, except such as are provided in the third section of this act, shall, together with the proceeds of said fishery, be equally divided between said towns; and all the expenses attending said suits, shall in like manner be equally borne by them. And the treasurers aforesaid respectively, may, in behalf of their respective towns, recover, by an action on the case, of any person or corporation withholding the same, one-half part thereof, in any court proper to try said action.

SECT. 8. *Be it further enacted*, The purchasers of the privilege of taking said fish shall in all respects conform themselves to such regulations and conditions as said committee shall publish, as aforesaid; and on failure thereof shall forfeit and pay for each offence a sum not exceeding twenty dollars.

SECT. 9. *Be it further enacted*, Any member of the committees aforesaid may be admitted as a competent witness in any prosecution for a breach of any regulation as aforesaid.

SECT. 10. *Be it further enacted*, The committees chosen by said towns in the month of November last, for regulating the taking of alewives in said rivers, agreeably to the provisions of the act then existing for that purpose, may perform all the duties for the present year that are required of committees hereafter to be chosen under the provisions of this act; and they, as also committees hereafter chosen for the purposes of said fishery, one dollar and twenty-five cents each for every day's service they may be actually engaged in performing the duties herein required of them.

SECT. 11. *Be it further enacted*, All laws heretofore passed respecting the fishery in said rivers are hereby repealed, excepting so far as respects any penalties already incurred for a breach of the same.

SECT. 12. *Be it further enacted*, This act shall take effect from and after its passage.—[February 26, 1838.

AN ACT to incorporate the Sandwich Buzzard's Bay Fishing Company.

(Ch. 111.) SECT. 1. *Be it enacted*, Edward B. Gibbs, Henry Gibbs and Benjamin Bourne, their associates and successors, are hereby made a corporation by the name of the Sandwich Buzzard's Bay Fishing Company, in the town of Sandwich, in the county of Barnstable, with authority to regulate the brook running through their lands, from Great Pond through other smaller ponds into Buzzard's Bay, in said Sandwich, as far as is necessary, for the purpose of an alewife fishery; and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person, without the permission of said corporation, shall take, catch or haul on shore any alewives in said brook, or within one-eighth of a mile in any direction from the mouth of said brook, he shall forfeit and pay, for the use of said corporation, a sum not exceeding two dollars for any quantity less than one barrel so taken, and the sum of five dollars for every barrel so taken, to be recovered in any court of competent jurisdiction.

SECT. 3. *Be it further enacted*, If any damage shall be done by said corporation to the property of any person not a member of said corporation, such person shall be entitled to damages, to be estimated in the same manner as damages occasioned by the laying out of highways.

SECT. 4. *Be it further enacted*, All persons who are or shall hereafter be owners of land adjoining said ponds or brooks, may become members of said corporation, subject, however, to pay their proportional part of the expenses which shall have been incurred by said corporation before the time of their admission as members.—[April 13, 1838.

1839.

AN ACT to incorporate the Trap's Creek Fishing Company in Edgartown.

[Additional Act, 1848, ch. 47.]

(Ch. 83.) SECT. 1. *Be it enacted*, John Coffin, Nicholas Norton, Chase Pease, their associates and successors, are hereby made a corporation by the name of the Trap's Creek Fishing Company, in Edgartown, in the county of Dukes County, and are empowered to alter the present outlet of Trap's Pond, so called, for the purpose of flowing the meadows in the winter season, and for a herring fishery therein, and to regulate the same; and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person, without the permission of said corporation, shall take, catch or haul on shore any herring in said pond or creek, he shall forfeit and pay, for the use of said corporation, a sum not exceeding three dollars, if the quantity so taken be less than one barrel; but if the quantity be more than one barrel, the person so offending shall forfeit and pay for each barrel of fish so taken the sum of five dollars, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, Nothing herein contained shall authorize the said company to take or use the private property of any person without his consent.

SECT. 4. *Be it further enacted*, All persons who now are, or may hereafter be, owners of land adjoining said Trap's Pond and Creek, may become members of said corporation, subject, however, to pay their proportional part of the expenses which shall have been incurred by said corporation before the time of their admission.—[April 3, 1839.

AN ACT to protect the Fisheries in certain Rivers in Barnstable and Marshpee.

[Additional Act, 1852, ch. 35.]

(Ch. 102.) SECT. 1. *Be it enacted*, No person shall take any fish with a seine in Oyster Island Harbor, in Barnstable, or in Poppenessett Harbor, in Barnstable and Marshpee, or in any of the bays or rivers con-

nected with said harbors, between the first day of May and the tenth day of June annually, under a penalty not exceeding twenty dollars for each offence, to be recovered in any court proper to try the same, to the use of the person who shall prosecute therefor.

SECT. 2. *Be it further enacted*, This act shall take effect from and after its passage.—[April 5, 1839.

AN ACT to incorporate the Eastham Fishing Company.

(Ch. 123.) SECT. 1. *Be it enacted*, Barnabas F. Knowles, Richard Sparrow and Freeman H. Myrick, their associates and successors, are hereby made a corporation by the name of the Eastham Fishing Company, for the purpose of constructing a fish-weir on the flat ground adjoining the upland of Henry Mayo, in Eastham, in the county of Barnstable, with leave to extend the same into the channel adjoining said flat ground, one-fourth of the width thereof, for the purpose of taking fish; with all the powers and privileges, and subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person shall take any fish from said weir without the permission of said corporation, he shall forfeit and pay to them a sum not exceeding five dollars, if the quantity so taken be less than one hundred pounds; but if the said quantity be more than one hundred pounds, he shall forfeit five dollars for every hundred pounds so taken, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, If any damage shall be done by said corporation to the property of any person not a member thereof, such person shall be entitled to damage, to be estimated in the same manner as damages occasioned by the laying out of highways.—[April 6, 1839.

AN ACT relating to the Fishery in Ipswich River.

[Additional Act, 1845, ch. 79. Previous Act, 1814, ch. 22.]

(Ch. 134.) SECT. 1. *Be it enacted*, The owners or occupants of the dam at Farley's Mill, so called, in Ipswich, their successors and assigns, shall, within ninety days from the passage of this act, construct, to the satisfaction and acceptance of the committee hereinafter named, a good and sufficient passage-way for the fish to pass over said dam up Ipswich River; and the said owners shall keep said passage-way, or cause the same to be kept open and in good repair from the tenth day of April to the first day of June annually, under a penalty not exceeding twenty dollars for each and every day they shall neglect so to do, to be recovered in any court of competent jurisdiction, to the use of the town which shall sue therefor.

SECT. 2. *Be it further enacted*, Charles Marston, of Barnstable, Elijah Swift, of Falmouth, and John Atkins, of Provincetown, shall be the committee for the purpose named in the preceding section.

SECT. 3. *Be it further enacted*, All provisions of law inconsistent with this act are hereby repealed.

SECT. 4. *Be it further enacted*, This act shall take effect from and after its passage.—[April 9, 1839.

1840.

AN ACT to protect the Fishery in Long Pond in Nantucket.

[Additional Act, 1841, ch. 76.]

(Ch. 24.) SECT. 1. *Be it enacted*, No person shall take any fish with a seine in Long Pond in Nantucket, under a penalty not exceeding twenty dollars for each and every offence, to be recovered in any court proper to try the same, to the use of the person who shall prosecute therefor.

SECT. 2. *Be it further enacted*, This act shall take effect from and after its acceptance by a vote of said town of Nantucket.—[March 7, 1840.]

AN ACT to protect the Fisheries in the Towns of Braintree and Weymouth.

[1817, ch. 151.]

(Ch. 37.) SECT. 1. *Be it enacted*, No person shall take any fish with a seine in Monatiquot River in the towns of Braintree and Weymouth, above Hingham and Quincy Bridge, crossing the Fore River in Weymouth, between the first day of February and the twentieth day of June, annually; nor shall any person take any fish in said river, by the use of torches or a light, at any time between the first day of December and the first day of March in any year, under a penalty not exceeding fifty dollars for each offence, to be recovered in any court proper to try the same, to the use of the person who shall prosecute therefor.—[March 18, 1840.]

AN ACT to protect the Fishery in the North River in the County of Plymouth.

[Previous Act, 1814, ch. 123.]

(Ch. 45.) SECT. 1. *Be it enacted*, If any fish committee chosen by the town of Pembroke, or any person authorized by said committee, shall find any seine or net cast in North River in the county of Plymouth, at any other time than that which is allowed by an act passed on the twenty-fifth day of February, in the year one thousand eight hundred and fifteen, regulating the fishery in said river, they may seize and take the same away; and it shall be forfeited to the use of the town of Pembroke.—[March 18, 1840.]

AN ACT to incorporate the Sanchachantacket Fishing Company in Edgartown, in Dukes County.

(Ch. 67.) SECT. 1. *Be it enacted*, Ichabod Norton, Constant Norton, Benjamin Kidder, their associates and successors, are hereby made a corporation, by the name of the Sanchachantacket Fishing Company, in Edgartown in Dukes County; and are empowered to alter the present outlet of Sanchachantacket Pond, so called, for the purpose of flowing the meadows in the winter season, and for a herring fishery therein, and to regulate the same; and for this purpose shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person, without the permission of said corporation, shall take, catch or haul on shore any herrings in said pond or in the creeks or outlet which may be made therefrom, he shall forfeit and pay, for the use of said corporation, a sum not exceeding three dollars, if the quantity so taken be less than one barrel; but if the quantity be more than one barrel the person so offending shall forfeit and pay for

each barrel of herring so taken, the sum of five dollars, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, Nothing herein contained shall authorize the said company to take or use the private property of any person without his consent; or deprive any person of the town of Edgartown of any privilege which he now has of taking any kind of fish, excepting herring, from said outlet or pond.

SECT. 4. *Be it further enacted*, All persons who now are or may hereafter be owners of land adjoining said pond or the creek or outlet to be made therefrom, may become members of said corporation, subject, however, to pay their proportional part of the expenses which shall have been incurred by said corporation before the time of their admission.

SECT. 5. *Be it further enacted*, The present owners of lands adjoining the said pond or the said creek or outlet, shall have each one share only in said fishery, and no one of them shall, by conveyance or descent of his lands, create or cause to be created an additional number of shares: *provided, however*, that each of the present owners or his successor or successors, may divide his original share into parts or fractions.—[March 21, 1840.

1841.

AN ACT concerning the Andrews Fishing Company.

[1836, ch. 177.]

(Ch. 57.) SECT. 1. *Be it enacted*, The present owners of land adjoining the Andrews River and Mill-pond, so called, in the town of Harwich, shall be each entitled to one share in the Andrews Fishing Company, in Harwich; and no one of them shall, by conveyance or descent of his land, create or cause to be created, an additional number of shares: *provided, however*, that each of the present owners or his successor or successors, may divide his original share into parts or fractions.—[March 6, 1841.

AN ACT concerning the Skinnaquits Fishing Company.

[1831, ch. 73; 1837, ch. 18.]

(Ch. 61.) SECT. 1. *Be it enacted*, The present owners of land adjoining the Skinnaquits Pond and Stream or Red River, so called, in the towns of Harwich and Chatham, shall each be entitled to one share in the Skinnaquits Fishing Company in Harwich and Chatham; and no one of them shall, by conveyance or descent of his land, create or cause to be created, an additional number of shares: *provided, however*, that each of the present owners or his successor or successors, may divide his original share into parts or fractions.—[March 6, 1841.

AN ACT in relation to certain Fisheries in Nantucket.

[1840, ch. 24.]

(Ch. 76.) SECT. 1. *Be it enacted*, From and after the passage of this act, the town of Nantucket, at any meeting duly warned and held for that purpose, may make and ordain such ordinances and regulations for the free access, increase, preservation and taking of fish in Maddecket Ditch and Harbor, and Long Pond, situated in said town, and may, for a violation of said ordinances and regulations, annex such penalties, not exceeding fifty dollars for one offence, to be recovered in an action of debt, for the use of

said town, by the treasurer thereof, as they may deem for the good of the inhabitants: *provided*, said ordinances and regulations are not repugnant to the laws and constitution of this Commonwealth.

SECT. 2. *Be it further enacted*, Said town may annually appropriate a sum not exceeding two hundred dollars to carry into effect the provisions of this act.—[March 13, 1841.

1842.

AN ACT to protect the Shad Fishery in Monomoy Bay.

(Ch. 62.) SECT. 1. *Be it enacted*, No person not an inhabitant of this state, shall take any shad in Monomoy Bay, within a line drawn from Monomoy Point to Point Gammon, in the county of Barnstable, for the purpose of carrying them away or offering them away, under a penalty not exceeding twenty dollars for each and every offence and a forfeiture of all fish so taken, to be recovered by indictment or by complaint before any justice of the peace; one half of said penalty and forfeiture to enure to the use of the complainant, the other half to the Commonwealth.

SECT. 2. *Be it further enacted*, No person, whether an inhabitant of this state or otherwise, shall throw overboard any offal or dressing of shad within the aforesaid line, or in any part of said bay below low-water mark, under a penalty not exceeding ten dollars for each offence, to be recovered in any court proper to try the same, to the use of the person who shall prosecute therefor.—[March 3, 1842.

AN ACT to incorporate the Long Pond Fishing Company, in Yarmouth.

(Ch. 75.) SECT. 1. *Be it enacted*, Zeno Kelley, Howes Berry, Eliakim Studley, their associates and successors, are hereby made a corporation by the name of the Long Pond Fishing Company in Yarmouth, and are empowered to open a brook or outlet from Long Pond to Swan Pond, so called, and also improve Parker's River (into which said ponds empty), to the sea, so far as may be necessary for the purpose of an alewife fishery, and to regulate the same; and for this purpose shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities contained in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person without permission of the corporation shall take, catch or haul on shore any alewives in said ponds or the brook or outlet so made, the person so offending shall forfeit and pay for the use of the corporation, a sum not exceeding two dollars, if the quantity so taken be less than one barrel; but if said quantity be more than one barrel, the person so offending shall forfeit and pay for each and every barrel of fish so taken, five dollars, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, If any damage shall be done by said corporation to the property of any individual, such individual shall be entitled to reasonable damages.

SECT. 4. *Be it further enacted*, Any inhabitant of the town of Yarmouth shall be entitled to the privilege of becoming a member of said corporation: *provided*, application is made therefor within six months from the passage of this act; and *provided, also*, that said applicants pay their proportion of the expenses which shall have accrued to said corporation.

SECT. 5. *Be it further enacted*, If the said corporation shall neglect to execute and complete the improvements provided for in this act, within three years from the passage thereof, then the same shall be void and of no effect.—[March 3, 1842.

AN ACT to incorporate the Coy's Brook Fishing Company, in Harwich.

(Ch. 82.) SECT. 1. *Be it enacted*, Seth Paine, Heman Bassett, William Field, their associates and successors, are hereby made a corporation by the name of the Coy's Brook Fishing Company, in Harwich, in the county of Barnstable and are hereby empowered to open said brook, commencing at the point where it empties into Herring River; thence up said brook to Coy's Pond (so called); thence through the bridge, swamp and land of Nathan Ellis and others, to the valley swamp; thence across the highway to Brier's Pond; thence through a swamp to Eldridge's Pond; thence from said Eldridge's Pond, to terminate in the Long Pond,—for the purpose of carrying on the herring fishery therein and to regulate the same; and for this purpose shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities set forth in the thirty-eighth and forty-fourth chapters of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person, without the permission of said corporation, shall take, catch or haul on shore any herring in said ponds or brook, he shall forfeit and pay for the use of said corporation, a sum not exceeding three dollars; and if the quantity be more than one barrel, the person so offending shall forfeit and pay for each barrel of fish so taken, the sum of five dollars, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, Nothing herein contained shall authorize the said company to take or use the private property of any person without his consent.

SECT. 4. *Be it further enacted*, All persons who now are or may hereafter be owners of land adjoining said Coy's Brook or ponds may become members of said corporation; subject, however, to pay their proportional part of the expenses which shall have been incurred by said corporation before the time of their admission.—[March 3, 1842.

1843.

AN ACT concerning Alewives in Herring River, in the Town of Barnstable.

[In part repealed, 1851, ch. 116.]

(Ch. 20.) SECT. 1. *Be it enacted*, The selectmen of the town of Barnstable, for the time being, or a major part of them, are hereby empowered, in the month of February, March or April annually, to prescribe the time, place or places and manner of taking alewives in Herring River, by the name of Marston's Mills, Herring River, in the town of Barnstable, such time not to exceed five days in a week; and they shall appoint some suitable person or persons to take the same, and fix the compensation to be paid therefor, if thought proper by said selectmen.

SECT. 2. *Be it further enacted*, The owners or occupants of dams across said river shall, annually, during such time, not exceeding sixty days in each year, as shall be prescribed by the selectmen of said town, or the major part of them, for the time being, keep constantly open, and maintain

through, over or around their respective dams, a passage sufficient and proper for the passing of said fish, to the satisfaction of said selectmen, under a penalty not less than ten nor more than sixty dollars for each and every twenty-four hours they shall neglect to open a passage-way as aforesaid; and the said selectmen shall, thirty days at least before the commencement of said period, notify in writing the owners or occupants of said dams of the time when said passage-ways shall be opened, and the manner in which they shall be constructed and regulated: *provided, however*, that if any owner or occupant shall at any time be dissatisfied with the determination of said selectmen in relation to the construction or regulation of such passage-way or passage-ways, such owner or occupant may, by application in writing to the selectmen of the town of Sandwich, for the time being, in said county of Barnstable, who are hereby constituted a committee for that purpose, cause such passage-way or passage-ways to be fixed, prescribed and regulated, in writing, by said committee; and such passage-way or passage-ways shall thereafter be, by the owners or occupants of said dam or dams, kept open and regulated in width and depth, and in all other respects pursuant to said written determination of said committee, under the same penalty as is herein before provided; and the expense of said committee shall be paid by the owners or occupants of said dam or dams, or by the said town of Barnstable, as said committee shall adjudge.

SECT. 3. *Be it further enacted*, The said selectmen of the town of Barnstable shall have full power and authority to cause the natural course of the stream through which said fish pass to be kept open and free of obstructions, except the dams aforesaid, and to remove all such obstructions except as aforesaid, and for that purpose, as well as for the other purposes of this act, shall have authority to go upon the land or meadow of any person through which said stream runs without being deemed trespassers; and if any person or persons shall molest the said selectmen, or either of them, in the execution of his or their duties under this act, or shall obstruct the passage of said fish except as aforesaid, the person or persons so offending shall, on conviction thereof before any justice of the peace in the county of Barnstable, pay a fine for every such offence not exceeding twenty nor less than ten dollars.

SECT. 4. *Be it further enacted*, If any person or persons shall take any of the fish aforesaid, in said river, or the ponds in which said fish cast their spawn, at any time, or in any place or manner other than shall be allowed by said selectmen as aforesaid, each person so offending shall for each and every such offence, on conviction thereof, pay a fine not exceeding twenty dollars nor less than one dollar.

SECT. 5. *Be it further enacted*, From and after the passing of this act, the inhabitants of said town, at their annual February meeting, or any meeting called for the purpose, shall determine the quantity of said fish that each family in said town shall receive, and establish the price therefor.

SECT. 6. *Be it further enacted*, All persons not otherwise disqualified shall be taken to be competent and legal witnesses in any prosecution upon this act, they being inhabitants of said town of Barnstable notwithstanding.

SECT. 7. *Be it further enacted*, All the forfeitures incurred by virtue of this act shall be two-thirds to the use of the said town of Barnstable, and

one-third to the person or persons giving information, to be recovered in an action of debt, in any court proper to try the same, to be brought by the treasurer thereof.—[March 20, 1843.

AN ACT to regulate the Fishery in Taunton Great River.

[1819, ch. 133; 1822, ch. 38; 1829, ch. 55; 1832, chs. 44, 120. Additional Act, 1844, ch. 62.]

(Ch. 73.) SECT. 1. *Be it enacted*, From and after the passage of this act, it shall not be lawful for any person or persons, except as is herein-after provided, to catch shad or alewives with seines or nets in Taunton Great River, from the first day of March to the fifteenth day of June in each year: *provided*, that it shall and may be lawful for the inhabitants of the several towns situated on said river, to catch shad and alewives with twelve seines or nets only, in the manner following, to wit: the towns of Somerset, Freetown and Fall River shall each have the right of disposing, at public auction, for their own benefit, of the privilege of catching shad and alewives with one seine or net only; the towns of Berkley, and Raynham, and Dighton, shall each have the right of disposing, at public auction, for their own benefit, of the privilege of catching shad and alewives with two seines or nets only; and the town of Taunton shall have the right of disposing, at public auction, for their own benefit, the privilege of catching shad and alewives with three seines or nets only, in the river aforesaid; and the purchaser or purchasers of the privileges which shall be located in the towns of Raynham and Taunton, shall not have a right to sweep with a seine or net more than fifteen rods in length; and the towns of Berkley and Dighton shall have the right to sweep with a seine or net, not more than twenty rods in length, above Rocky Point, and but four days in each week, beginning at four o'clock on Monday morning and ending at four o'clock on Friday morning; the purchaser or purchasers of the privilege or privileges, which shall be located in the towns of Berkley and Dighton, below Rocky Point, shall have the right to sweep with a seine or net thirty-four rods in length and no more, five days in each week, beginning at four o'clock on Monday morning and ending at four o'clock on Saturday morning; and the purchaser or purchasers of the privilege or privileges, which shall be located in either of the towns of Somerset, Freetown or Fall River, shall have a right to sweep with a seine or net forty rods in length and no more, beginning at four o'clock on Monday morning and ending at four o'clock on Friday morning; and *provided, also*, that each of said towns shall, at a legal meeting between the first day of September and the last day of December in each year, dispose and make sale of, at public auction, for the next year, and so from year to year, their privilege of catching shad and alewives with seines or nets in the river aforesaid, for the time aforesaid, to such person or persons as shall offer the most for the same, and give sufficient security for the payment of the purchase moneys at such time and in such manner as the respective towns shall order.

SECT. 2. *Be it further enacted*, The several purchasers of the privileges aforesaid, shall select the place where they intend to use their seine or net, for the purpose of catching shad and alewives and shall file a certificate thereof with the clerk of the town within which they have determined to exercise their said privilege as aforesaid, on or before the first day of March in each year: *provided*, that the privilege which shall be purchased of the

said town of Somerset, shall be exercised within the limits of said town, and the person or persons so purchasing and locating the privileges aforesaid, shall have the right to catch shad and alewives in the river aforesaid, for the time aforesaid and no other persons.

SECT. 3. *Be it further enacted*, No purchasers of a privilege aforesaid, shall make use of a seine or net for the purpose aforesaid, at any other place on said river than the place so selected and certified as aforesaid, during the time aforesaid, and no seine or net shall be located or swept within one mile of the dam located near King's Bridge, across Taunton Great River, in the town of Raynham; and no seine or net shall be located or swept within one and a half miles of the said dam, in the town of Taunton, and no seine or net shall be swept more than forty rods on said river, above Rocky Point and not more than forty-five rods in length below Rocky Point, and no person shall be permitted to set any seine, net, wear or other obstructions in or across said river, for the purpose of taking shad or alewives or obstructing their passage along said river, during the time aforesaid.

SECT. 4. *Be it further enacted*, If any person or persons shall draw or sweep with any seine or net, on any day or time other than those before expressed, or at any other place other than those selected as aforesaid, or shall on any day, at any place, set any seine or net, wear or other obstruction in or across said river or any part thereof, or any waters connected with the same, with the intention to catch or destroy any of the fish called shad or alewives, within the time limited in the first section of this act, or shall at any time or any place, drive with boat or boats in said river, or use any other implements whatsoever, with intention to catch or destroy said fish or hinder their passage up said river, or by any means whatsoever shall impede or hinder the passage of said fish up said river, or any part thereof, with intention to drive, hinder, disturb or destroy any of the fish called shad or alewives in the waters of said river, or shall whip with poles or any other instrument in the waters of said river, or throw into said river loam or any other thing whatsoever, with the intention to hinder the passage of said fish up said river, he and each and every individual who shall violate this act, or any part thereof, shall each and every one forfeit and pay a sum not less than five dollars nor more than twenty dollars for each and every such offence, to be recovered by action of debt, in any court proper to try the same, for the use and benefit of him who shall prosecute or sue for the same, or shall be imprisoned in the county jail, or in the house of correction, for a term of time not exceeding sixty days.

SECT. 5. *Be it further enacted*, If any person or persons be found fishing with any seine or net, or with other machine or instrument or instruments, which shall be used by any person or persons in taking or carrying away any of the fish called shad or alewives, contrary to the true intent and meaning of this act, it shall be lawful for any fish-warden or inspector chosen by virtue of this act or the law regulating the fishery in the town of Middleborough, to seize or take such seine or net or fish or implements as before mentioned, and convert and retain the same to their own benefit and use, without any process of law whatever, and if prosecuted therefor, to give this act as evidence of his authority for so doing.

SECT. 6. *Be it further enacted*, The several towns shall, at their annual meeting in the months of March or April, choose by ballot, three or more

persons, being freeholders in said town, as fish-wardens, whose duty it shall be, jointly and severally, to see that this act is enforced and prosecute for all breaches thereof, and each fish-warden shall be chosen to the faithful discharge of his duty, and cause a record to be made of his oath in the town where said fish-warden is chosen, within ten days after his election; and said fish-warden and inspectors, when sworn, are authorized to measure seines and nets and to pursue and execute the duties of their office in any place where fish may be taken within the towns aforesaid, and to enter any building where they suppose this act or any parts of it are violated; and if any person, chosen a fish-warden or inspector as aforesaid, shall refuse or neglect to be sworn as aforesaid, for the space of five days after he shall be duly notified of his election as aforesaid, he shall forfeit and pay a fine of ten dollars to the use of said town, to be recovered by action of debt by the treasurer thereof, and such town shall proceed to a new choice and so on, as often as circumstances shall require; and if any of the towns aforesaid shall neglect to choose fish-wardens as aforesaid, or to make sale of their privileges aforesaid, within the time limited therefor, according to the meaning of this act, such town shall forfeit and pay a fine of one hundred dollars for the use of him or them who shall prosecute therefor.

SECT. 7. *Be it further enacted*, The laws heretofore made for the regulation of the fishery and the passage-way for fish in Taunton Great River, except so far as respects the town of Middleborough, be and the same are hereby repealed: *provided, however*, that any prosecutions which have been or may be commenced, for the recovery of any forfeitures recovered by virtue of the laws hereby repealed, may be prosecuted to final judgment and execution in the same manner as if this act had not been passed; and *provided, also*, that all contracts made prior to the passing of this act, by any of the towns aforesaid, by virtue and in pursuance of the laws hereby repealed, shall be valid to all intents and purposes, this act to the contrary notwithstanding.—[March 24, 1843.]

1844.

AN ACT further to regulate the Fisheries in the Little River.

[Additional Act, 1845, ch. 149.]

(Ch. 59.) SECT. 1. *Be it enacted*, The inhabitants of the towns of West Cambridge and Somerville in the county of Middlesex, who now have by law the right to take fish in that part of Little River, so called, which lies north of Alewife Bridge and the Winter Hill road in said towns, shall hereafter have the right to take fish three or four days successively in five of the days on which they have by law heretofore had such right, computing from the first day of March in each year, and on no other day.

SECT. 2. *Be it further enacted*, Every person offending against this act shall forfeit and pay to any person who shall sue for the same, a sum not exceeding twenty dollars for each offence.

SECT. 3. *Be it further enacted*, This act shall take effect from its passage.—[March 6, 1844.]

AN ACT in addition to an Act to regulate the Fishery in Taunton Great River.

[1819, ch. 133; 1822, ch. 38; 1829, ch. 55; 1832, ch. 44; 1843, ch. 73. Additional Act, 1855, ch. 401.]

(Ch. 62.) *Be it enacted*, The purchaser or purchasers of the fishing privileges sold by the town of Somerset and located within said town, may improve the same at all times from sunrise on Monday morning to sunset on Saturday evening; and Broad Cove in Somerset shall be exempted from the operation of the law regulating the fishery on Taunton Great River, anything in the act entitled "An Act to regulate the fishery in Taunton Great River," passed March twenty-fourth, in the year eighteen hundred and forty-three, to the contrary notwithstanding.—[March 6, 1844.

AN ACT to regulate the Fishery in Palmer's River.

[Special Laws, v. 3, p. 373. 1819, ch. 11; 1820, ch. 51; 1836, ch. 130; 1837, ch. 184. Additional Act, 1852, ch. 92.]

(Ch. 63.) **SECT. 1.** *Be it enacted*, From and after passing this act, no person or persons, except as is hereafter provided, shall take shad or alewives with seines or in nets, in Palmer's River in the town of Rehoboth in the county of Bristol, from the first day of April to the fifteenth day of June in each year: *provided*, that the inhabitants of Rehoboth may, at a legal meeting held for that purpose, dispose of the privilege, at public auction, of taking shad and alewives, with scoop-nets only, in said river, for the time aforesaid, to such person or persons as may offer the highest price for the same and shall give sufficient security of the payment of the purchase money, at such time and in such manner as the town shall order.

SECT. 2. *Be it further enacted*, The said town may sell said privilege in sections, as the town may determine; and the purchaser or purchasers of any privilege or privileges of taking shad or alewives aforesaid, or those employed by him or them, may take any of the said fish in said river with scoop-nets, three nights, in the night-time only, in each week, beginning on Monday at sunset and ending at sunrise on Thursday, and may take said fish in any part of the river aforesaid, between Swanzey line and the Orleans Dam on said river in said Rehoboth; and no person shall be allowed to skim or drive the fish in said river, nor shall any shad or alewives be taken after the fifteenth day of June in each year.

SECT. 3. *Be it further enacted*, The wears in said river shall be located as follows: the first on the river below the end of a fence running from the highway between the land of William K. Bullock, John Davis, 3d, and Ariel Horton (fishing to commence by the land of Joshua Miller); second, by the land of Bordon Munroe; third, by the land of Joseph Watson; fourth by the land of Dr. Samuel Bullock; fifth, by the land of Lovell Bullock; sixth, by the land of widow Betsey Pierce; seventh, by the land of Lewis Pierce; eighth, by the land of John M. Davis; ninth, by the land of John Thurber; tenth, by the land of John Watson; eleventh, by the land of Dexter Barney; the wears to be situated on either side of the rivers, as the purchaser may determine, the distance between each wear to be not less than twenty rods.

SECT. 4. *Be it further enacted*, The town of Rehoboth, at their annual meeting in March or April, may choose one or more suitable persons to serve as fish-wardens, who, when sworn, shall see this act enforced, and may prosecute for all violations thereof.

SECT. 5. *Be it further enacted*, If any person shall fish with seine or net in any time, place or manner other than as before mentioned, or shall set any net or seine, weir or any other obstruction in said river, or in any part thereof, with the intent to take or destroy any shad or alewives, he shall forfeit and pay twenty dollars for each offence, to be recovered to the use of the county in which the offence was committed, or by action of debt, one half to the person prosecuting for the same, and the other half for the use of the town in which the offence shall be committed.

SECT. 6. *Be it further enacted*, All laws heretofore relating to fishing in Palmer's River in the town of Rehoboth, are hereby repealed.

SECT. 7. *Be it further enacted*, This act shall take effect from and after its passage.—[March 7, 1844.

AN ACT in addition to an Act for the preservation of the Fish called Alewives in Agawam and Half-way Pond Rivers in the County of Plymouth.

[1838, ch. 19. Additional Act, 1853, ch. 377.]

(Ch. 65.) SECT. 1. *Be it enacted*, The town of Plymouth may choose their fish-committee at their annual town meeting in March or April, in each year, which committee, when so elected, shall have all the powers and duties which they would have had if elected in November, anything in the act to which this is in addition to the contrary notwithstanding.

SECT. 2. *Be it further enacted*, This act shall take effect from and after its passage.—[March 7, 1844.

AN ACT in addition to an Act to regulate the Alewife Fishery in the River and Stream in the Town of Harwich.

[Special Laws, v. 1, p. 166; 1813, ch. 57; 1813, ch. 115; 1824, ch. 107. Additional Act, 1855, ch. 301.]

(Ch. 67.) SECT. 1. *Be it enacted*, The time during which the sluice is required, in the second section of the act of July fourth, in the year seventeen hundred and eighty-seven, to which this is in addition, to be kept open in the dams across Herring River in the town of Harwich, is hereby extended from the twenty-fifth day of April to the twentieth day of June, in each year, and the penalties for obstructing said sluice-ways, provided in said act, shall apply to all the time so extended,

SECT. 2. *Be it further enacted*, The provisions of this act shall take effect from and after its passage.—[March 7, 1844.

1845.

AN ACT relating to the Fishery in the Ipswich River.

[1825, ch. 78; 1829, ch. 40; 1839, ch. 134. Additional Acts, 1845, ch. 91; 1855, ch. 171.]

(Ch. 79.) SECT. 1. *Be it enacted*, The owners or occupants of the dam at the Ipswich Manufacturing Company's mill in Ipswich, their successors and assigns, shall within six months of the passage of this act, construct, in the manner prescribed by the committee hereinafter named, a good and sufficient passage-way for the fish to pass over said dam up Ipswich River; and the said owners shall keep said passage-way or cause the same to be kept open and in good repair from the tenth day of April to the first day of June, annually, under a penalty not exceeding twenty dollars for each and

every day they shall neglect so to do, to be recovered in any court of competent jurisdiction, to the use of the town which shall sue therefor.

SECT. 2. *Be it further enacted*, Solomon Davis, of Truro, Oliver Ames, of Easton, John Dunlap, of Provincetown, James Long, of Harwich, Josiah O. Lawrence, of Cohasset, Caleb Lombard, of Wellfleet, and Richard Stevens, of Truro, are hereby appointed a committee for the purpose named in the preceding section.

SECT. 3. *Be it further enacted*, All provisions of law inconsistent with this act are hereby repealed.—[February 26, 1845.

AN ACT relating to the Fish-way at Manning's Dam across Ipswich River.

[See, *ante* ch. 79 Additional Act, 1855, ch. 171.]

(Ch. 91.) SECT. 1. *Be it enacted*, The owner or occupants of the dam erected by Thomas Manning across Ipswich River, his assigns or successors, may construct, in the manner prescribed by the committee hereinafter named, a good and sufficient passage-way for the fish to pass over said dam up Ipswich River; and the said owner or owners shall keep said passage-way or cause the same to be kept open and in good repair from the tenth day of April to the first day of June, annually, under a penalty not exceeding twenty dollars for each and every day they shall neglect so to do, to be recovered in any court of competent jurisdiction, to the use of the town who shall sue therefor.

SECT. 2. *Be it further enacted*, Solomon Davis, of Truro; Oliver Ames, of Easton; John Dunlap, of Provincetown; James Long, of Harwich; Josiah O. Lawrence, of Cohasset; Caleb Lombard, of Wellfleet, and Richard Stevens, of Truro, are hereby appointed a committee for the purpose named in the preceding section.

SECT. 3. *Be it further enacted*, Whenever a fish-way shall be constructed at said Manning's Dam, as ordered by the above committee, all former laws relating to fish-ways at said dam shall be repealed.—[February 28, 1845.

AN ACT to incorporate the White Pond Fishing Company.

(Ch. 130.) SECT. 1. *Be it enacted*, Henry Kelley, John Robbins, Job Chase, their associates and successors, are hereby made a corporation by the name of the White Pond Fishing Company, in Harwich, for the purpose of making improvements for the preservation and taking of fish called alewives, in a brook between Herring River, and a pond known as the White Pond, in said Harwich, and for that purpose shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, If any person without the permission of said corporation, shall take, catch or haul on shore any of said fish in the brook or the pond from which said brook issues, he shall forfeit and pay a fine not exceeding five dollars for each offence, if the quantity so taken be less than one barrel; but if the quantity be more than one barrel, such person so offending shall forfeit and pay for each barrel of fish so taken, five dollars for the use of said corporation, to be recovered in any court proper to try the same.

SECT. 3. *Be it further enacted*, If any damage shall be done by said corporation to the property of any individual not a member of the corporation, such individual shall be entitled to reasonable damage therefor.

SECT. 4. *Be it further enacted*, All persons who now are or shall hereafter be owners of land adjoining said brook or pond, may become members of said corporation, subject, however, to pay their proportional part of the expense which shall have been incurred by said corporation, before the time of their admission.

SECT. 5. *Be it further enacted*, This act shall take effect from and after its passage.—[March 15, 1845.]

AN ACT relating to the Fishery in Little River.

[1830, ch. 67; 1836, ch. 158.]

(Ch. 149.) SECT. 1. *Be it enacted*, The fifth section of the act passed on the fourteenth day of February, in the year one thousand eight hundred and twenty-one, is hereby repealed.

SECT. 2. *Be it further enacted*, All persons now having a right of fishing with seines in that part of Little River which lies within seventeen rods from its juncture with Mystic River, in the county of Middlesex, may take fish in the manner provided by law, on two Mondays successively in three of the Mondays between the first day of March and the last day of June in each year, except on the first and second Mondays of the time, during which persons living in West Cambridge and Somerville and having a right to fish in that part of Little River south of Alewife Bridge and the Winter Hill road, may exercise that right, and on no other days.

SECT. 3. *Be it further enacted*, Every person offending against this act shall forfeit and pay, to any person who shall sue for the same, a sum not exceeding twenty dollars.

SECT. 4. *Be it further enacted*, This act shall take effect from and after its passage.—[March 18, 1845.]

AN ACT to incorporate the Herring River Company.

(Ch. 161.) SECT. 1. *Be it enacted*, Anthony Kelley, Job Chase and Richard Baker, Jr., their associates and successors, are hereby made a corporation by the name of the "Herring River Company," for the purpose of deepening and protecting the mouth and channel of Herring River, so called, in the town of Harwich and county of Barnstable, with all the powers and privileges and subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. *Be it further enacted*, Said company, for the purposes aforesaid are hereby authorized to make excavations, embankments and fences, and to drive piles along the banks of said river and into the sea, in such direction and to such extent as they shall deem expedient: *provided*, that in no case shall the legal rights of any persons or corporations whatever be affected by this act.

SECT. 3. *Be it further enacted*, Any person who shall wilfully and maliciously injure or destroy any embankments, fences, piles or other works erected by said company in accordance with the provisions of this act, shall be liable to a penalty of fifty dollars for each offence, to the use of the Commonwealth, to be recovered by indictment therefor.

SECT. 4. *Be it further enacted*, This act shall take effect from and after its passage.—[March 20, 1845.]

1846.

AN ACT to authorize the Town of Weymouth to transfer a Right of Fishing.

[Special Laws, v. 2, p. 434. 1825, ch. 43; 1836, ch. 198.]

(Ch. 92.) SECT. 1. *Be it enacted*, From and after the time of this act going into effect, the Weymouth Iron Company shall have and enjoy all the rights and privileges in respect to the taking of alewives within the limits of the town of Weymouth, now belonging to said town; and any committee, and any member or members of said committee, that shall be appointed from time to time by said company, or by the directors thereof, to regulate, superintend, or have charge of, or the care and management of the taking and disposing of said fish, shall dispose of the same for the benefit of said company, and account with the said company for the proceeds thereof; and such committee, or either of them, shall have power and authority to remove from or out of Back River, in said town, and the brooks and streams leading to Great Pond and Whitman's Pond, in said town, any obstructions that may be made to the free passage of said fish into said ponds or repassing from them into the sea; and said committee going, or either of them, into the land of any person or persons for this purpose, shall not be deemed or held as a trespass; and the said committee, or a major part of them (if more than one) shall determine the particular place or places where the said fish shall be taken, and give public notice thereof by posting up one or more notifications in some conspicuous place or places in said town, on or before the first day of May annually.

SECT. 2. No person shall catch or take any of said fish in any of the rivers, brooks or streams, canals or water channels leading to or from the said ponds, without the direction or leave of said committee, or a major part of them; and whosoever shall take, catch or haul on shore any of said fish with a seine, scoop-net or drag-net, in either of the ponds aforementioned, or in Weymouth Back River, or in the river, brooks, streams, canals or channels through which the said fish pass into said ponds, or shall, with any seine, scoop-net or drag-net, or in any other way obstruct the passage of said fish to or from said ponds, or either of them, or shall obstruct said committee, or either of them, in the execution of their duty, shall for each such offence forfeit and pay not exceeding thirteen dollars nor less than ten dollars; and in case the offence be committed in the night a sum not exceeding thirty dollars nor less than twenty dollars, to be prosecuted or sued for, and recovered, in any court proper to try the same, in an action on the case, or other proper form of action, in the name of said Weymouth Iron Company, or the name or names of such committee, for the benefit of said company, saving when any person shall give information of any breach of this act, he shall, upon conviction of the offender, be entitled to one-third part of the forfeiture recovered; and no person shall be considered as disqualified from being a witness on any trial that may be had pursuant to this act, on account of his being an inhabitant of said town, or of his being a member of said committee.

SECT. 3. Each householder in said town of Weymouth shall, on his making seasonable application for that purpose to said committee, or any mem-

ber thereof, or to the person employed by said committee to superintend, regulate and manage the taking of said fish at the place, or any of the places for taking the same, have the right to purchase four hundred fresh alewives for his own consumption, of those which shall be taken each year under authority of said committee, at the price of twenty-five cents per hundred, before said alewives shall be cured or otherwise disposed of: *provided*, the person so applying shall be ready seasonably to pay for and remove such quantity, and in case any such inhabitants so applying, and being so ready to pay for and remove said quantity of fresh fish, shall not be supplied therewith, as far as the quantity taken under authority of said committee shall suffice for the purpose, said company shall forfeit to him the sum of five dollars, to be sued for and recovered by him in his own name, in an action of debt or on the case, or other proper action or proceeding against said corporation or against said committee, or any member thereof, in any court proper to try the same.

SECT. 4. The agreement heretofore entered into between the proprietors of the falls and water privileges on Alewife River, otherwise called Back River, and the town of Weymouth, as recited in the preamble of the special act of 1825, chapter forty-eight, entitled "An Act in addition to an act for the regulating and disposing of the fish called alewives within the limits of the town of Weymouth, and for the more effectually securing to said town the advantages thereof," shall still be and remain in force, as also said additional act, the foregoing provisions of this act notwithstanding, excepting that in respect to the provisions of said additional act, the said Weymouth Iron Company shall be substituted in the place of the town of Weymouth, as a party to the terms of said agreement and the provisions of said additional act; and any committee appointed by said company, from time to time, in pursuance of the provisions of the first section of this act, shall be substituted in the place of, and have the rights, powers and duties of, and be subject to the provisions of said additional act, relating to the fish-committee of said town.

SECT. 5. The purchase money for said privilege, paid to said town of Weymouth in pursuance of this act, shall be kept as a fund, to be managed and invested by the treasurer of said town of Weymouth, or by any person or committee appointed or authorized by said town for the purpose; and the same shall be loaned only on security of real estate, except to said town; and the annual interest and income of said fund shall be annually expended for the support of schools in said town, to be divided in the same manner as other moneys raised for the support of schools.

SECT. 6. This act shall go into effect, on said town of Weymouth causing to be conveyed to said company the fish house for said fishery, and the land under the same, and adjoining thereto, belonging to said town, and the said company paying to the selectmen of said town, or either of them, a sum of money, the annual interest of which, at six per cent. per annum, is or shall be assented and agreed to by said selectmen as sufficient to yield an annual interest equal to the net annual income of said fishery for the last thirty years.—[March 11, 1846.

AN ACT to repeal the Laws regulating the Fishery in Merrimack River.

[1803, p. 43.]

(Ch. 192.) SECT. 1. *Be it enacted*, From and after the passing of this act, the several laws regulating the fisheries in Merrimack River, are hereby repealed, except so much of said laws as relate to any sluice or passageway, dams or other obstruction to the free passage of fish up and down said river, and said appeal shall in no wise affect any legal rights that may have accrued under said laws.—[April 7, 1846.]

1847.

AN ACT to regulate the Herring or Alewife Fishery in Chappaquonset Pond and Creek in the Town of Tisbury.

(Ch. 40.) SECT. 1. *Be it enacted*, The inhabitants of Tisbury in the county of Dukes County, at their annual meeting in the month of March or April, shall choose one or more discreet persons as a fish-committee, who shall be sworn to the faithful performance of their duty, and whose duty it shall be to regulate the herring or alewife fishery in Chappaquonset Pond and Creek in said town; to prescribe the time, manner, place or places where said fish may be taken by the inhabitants of said town; also to remove any obstruction that may be in said creek, and to keep the stream open for the passage of said fish from the Vineyard Sound or Sea, into Chappaquonset Pond, so that the inhabitants of said town may enjoy a free fishery.

SECT. 2. The fish committee for the time being, shall post up, at three or more public places in said town, on or before the tenth day of March in each year, the regulations established by said committee respecting the fishery in Chappaquonset Pond and Creek.

SECT. 3. Any person who shall oppose or obstruct said committee in the performance of their duty, or shall obstruct said fish in their passage, or take or destroy any of said fish at any time or place, except at such time or place as said committee shall direct, on conviction before any justice of the peace in the county of Dukes County not an inhabitant of the town of Tisbury, shall forfeit and pay a fine for each offence, not exceeding twenty dollars, one half to the use of the town, the other half to the person or persons giving the information.

SECT. 4. All persons not otherwise disqualified shall be taken to be competent and legal witnesses in any prosecution upon this act, they being inhabitants of the town of Tisbury notwithstanding.

SECT. 5. The selectmen of the town of Tisbury are hereby empowered to direct the fish-committee to take and sell such part of the fish taken in said creek as shall be sufficient to pay all expenses that have accrued or may accrue in securing and preserving said fishery: *provided*, that the quantity or number so required shall not exceed one-sixth part of all the fish taken by the inhabitants of said town, in any one year, at said fishery.

SECT. 6. If any damage is sustained by the owners of the land on which said fish are taken by the inhabitants of the town of Tisbury, the selectmen of said town shall pay a reasonable compensation therefor, when demanded. And in case of a refusal by the selectmen to pay a reasonable

compensation the same may be recovered by an action on the case against the said town of Tisbury.

SECT. 7. No person shall take any herring or alewives from the Vineyard Sound or Sea within one mile of said Chappaquonset Creek, or make any new outlets from Chappaquonset Pond, except it shall be done by a vote of the inhabitants of the town of Tisbury, at a legal meeting warned and held for that purpose.

SECT. 8. Nothing in this act shall be so construed as to prevent the owners of marsh or meadows from flowing or draining their meadows through Chappaquonset Creek, whenever it can be done without obstructing the passage of the herrings or alewives to or from Chappaquonset Pond. And nothing in this act contained shall affect any suit now pending, or the legal rights of any person.—[March 4, 1847.

AN ACT to regulate the Herring Fishery in the Town of Falmouth.

[1798, p. 222; 1799, p. 289; 1825, ch. 63; 1851, ch. 98; 1858, ch. 130. Additional Act, 1855, ch. 279.]

(Ch. 94.) SECT. 1. *Be it enacted*, The inhabitants of the town of Falmouth in the county of Barnstable, may, at any legal meeting called for that purpose, prescribe the times, manner and places for taking alewives or herrings in Dexter's River, and other waters connecting Coonamisset Pond with the Vineyard Sound or Sea, and also in the other rivers, streams and ponds which have heretofore been used by the inhabitants of said town as herring fisheries; and they may also at said meeting adopt such further rules and regulations as may by them be deemed expedient for the preservation of said fishery; and they may dispose of the privilege of taking said fish in any way or manner they may think proper; and they shall choose by ballot a committee, consisting of three discreet persons, who shall cause the regulations adopted by said town to be carried into effect, and who shall be sworn to the faithful performance of their duty.

SECT. 2. The selectmen for the time being shall post up the regulations so established, in three or more public places in said town, in each and every year, within one week after their passage.

SECT. 3. If any person shall take any of said fish in any of the waters aforesaid, at any time or in any manner other than shall be allowed by said town, he shall, for each offence, on conviction thereof, pay a fine not exceeding five dollars; and if any person shall, in either of the months of March, April, May or June, without permission of the town or fish-committee, set or shoot a seine in the Vineyard Sound, within forty rods of the mouth of said rivers or streams, for the purpose of taking said fish, he shall, for each offence, on conviction thereof, pay a fine not exceeding twenty dollars; the fines and forfeitures to be recovered in any court proper to try the same, one half to the use of the town, and the other half to him who shall prosecute therefor; and in all such prosecutions any inhabitant of said town not otherwise disqualified shall be a competent witness: *provided*, that this act shall in no wise be so construed as to affect the legal rights of any corporation or persons whatever.

SECT. 4. The acts passed on the second day of March in the year one thousand seven hundred and ninety-eight, and on the first day of March in the year one thousand seven hundred and ninety-nine, to prevent the de-

struction and to regulate the catching of alewives in the rivers and streams of the town of Falmouth in the county of Barnstable, are hereby repealed.

SECT. 5. This act shall take effect from and after its passage.—[March 17, 1847.

1848.

AN ACT to repeal "An Act to prevent the Destruction of Fish in the several Ponds in the Town of Haverhill."

(Ch. 12.) SECT. 1. *Be it enacted*, An act entitled "An Act to prevent the destruction of fish in the several ponds in the town of Haverhill," passed on the seventh day of February, in the year one thousand eight hundred and twenty, is hereby repealed: *provided*, that nothing in this act shall be so construed as to release or absolve any person or persons from any liability incurred under or by any provision of the act hereby repealed.

SECT. 2. This act shall not have the effect to revive any statute law relating to the subject of the act hereby repealed, and which may have been in force prior to the passage of the said repealed act.

SECT. 3. This act shall take effect from and after its passage.—[February 14, 1848.

AN ACT in addition to an Act to incorporate the Trap's Creek Fishing Company, in Edgar town.

[1839, ch. 83. Additional Act, 1855, ch. 299.]

(Ch. 47.) SECT. 1. *Be it enacted*, The present owners of lands adjoining the said Trap's Pond or Creek, shall have each one share only in said fishery, and no one of them shall, by conveyance or descent of his lands, create or cause to be created, an additional number of shares: *provided, however*, that each of the present owners and his successor, may divide his original share into parts or fractions.

SECT. 2. This act shall take effect from and after its passage.—[March 18, 1848.

AN ACT relating to the Alewife Fishery in North River.

[1814, ch. 123. Additional Acts, 1852, ch. 66; 1853, ch. 350; 1856, ch. 83.]

(Ch. 116.) SECT. 1. *Be it enacted*, So much of the act passed February twenty-fifth, in the year one thousand eight hundred and fifteen, as prescribes the length of seines to be used in the North River in the taking of alewives, be and the same is hereby repealed; *provided, however*, that the legal rights of any person and corporations, who may have commenced suits under the provisions of the law hereby repealed, shall remain the same as before the passage of this act.

SECT. 2. This act shall take effect from and after its passage.—[April 18, 1848.

AN ACT to incorporate the Pocha Pond Meadow and Fishing Company.

[Additional Act, 1851, ch. 126, repealing section four of this Act.]

(Ch. 185.) SECT. 1. *Be it enacted*, John Vinson, J. T. E. Gage, William W. Huxford, their associates and successors, are hereby made a corporation by the name of the Pocha Pond Meadow and Fishing Company, in Edgar-

town, in Dukes County, and are empowered to close the outlet of said pond by building a causeway from the twenty-acre lot, so called, to Cape Poge Beach in said Edgartown: *provided*, that said causeway shall be built of suitable width and kept in such repair that loaded carriages may pass and repass in safety over the same, and shall at all times be free for the public to travel over; and to make a new outlet or creek from Pocha Pond into the harbor of Edgartown, through lands of said proprietors, at a convenient place, for the purpose of draining the meadows and for regulating the herring fishery thereby created: *provided*, that suitable bridges shall be built over said creek or outlet, where carriages usually pass; and for these purposes, shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities, set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. If any person, without the permission of the corporation, shall take, catch or haul on shore any herring in said pond or creek, or outlet which may be made therefrom, he shall forfeit and pay for the use of said corporation a sum not exceeding three dollars, if the quantity so taken be less than one barrel; but if the quantity be more than one barrel, the person so offending shall forfeit and pay for each barrel of herring so taken, the sum of five dollars, to be recovered in any court proper to try the same.

SECT. 3. Nothing herein contained shall deprive any inhabitant of the town of Edgartown of the privilege of taking any fish other than herring from said creek, pond or outlet.

SECT. 4. If any person, not a proprietor of this corporation, shall receive damage by the flowing of his meadows or in closing the present outlet, the county commissioners of Dukes County, after a hearing of all parties interested, shall estimate the amount of damages which such person may have sustained by said corporation, which damages, if any, said corporation shall pay; and either party, if dissatisfied with any estimate made by said commissioners, may apply for a jury to assess the damages, either at the same meeting at which such estimate shall be completed and returned or at the next regular meeting of said county commissioners; and the like proceedings shall be had thereon as are provided for the recovery of damages for laying out highways.

SECT. 5. All persons who now are owners of land adjoining said pond or creek, or outlet to be made therefrom, may become members of said corporation at any time previous to the commencing by said corporation, to close said outlet.

SECT. 6. The present owners of land adjoining said pond or creek or outlet, shall have each one share only in said fishery; and no one of them shall, by conveyance or descent of his lands, create or cause to be created, an additional number of shares: *provided, however*, that each of the present owners or his successor or successors, may divide his original share into parts or fractions.—[April 25, 1848.

AN ACT concerning the Alewife Fishery in Saugus River.

[1801, p. 504; 1803, p. 398; 1823, ch. 97.]

(Ch. 187.) SECT. 1. *Be it enacted*, The towns of Lynn, Saugus and South Reading may, together or separately, enforce the laws which regulate the

alewife fishery in Saugus River and its tributary streams, in their several towns.

SECT. 2. All acts inconsistent with the provisions of this act are hereby repealed.—[April 25, 1848.

1849.

AN ACT to protect the Trout Fishery in Marshpee River.

[1853, 186; 1859, 105. Repealed 1860, ch. 46.]

(Ch. 36.) SECT. 1. *Be it enacted*, No person shall take any trout in Marshpee River, in the district of Marshpee, in the county of Barnstable, from the fifteenth day of September in each year to the first day of April in the year next ensuing.

SECT. 2. No person except the proprietors of said district shall take any trout in said river, at any time, without a written permit from the treasurer of Marshpee, which shall specify the time when and the places where the person holding the same is allowed to take fish; and no person shall at any time use any other means of taking trout in said river than by angling with hooks and lines.

SECT. 3. The said district may, by vote in legal meeting, make any regulations or by-laws respecting said fishery which may not be repugnant to the provisions of this act; and the income from said fishery shall inure wholly to said district.

SECT. 4. Any person offending against the provisions of this act, or any regulations or by-laws passed by authority of the third section of this act, shall forfeit and pay a fine of five dollars for each and every offence, to be recovered by prosecution, before any justice of the peace in the county of Barnstable, to the benefit of said district; and the proprietors of said district shall be competent witnesses on the trial of any such process.

SECT. 5. Any person who shall have in his possession any trout taken from said river contrary to the provisions of this act, knowing the same to have been so taken, shall forfeit the sum of fifty cents for every trout so found in his possession.

SECT. 6. If any minor shall offend against the provisions of this act, the parent, master or guardian of such minor shall be liable, and may be prosecuted accordingly therefor.

SECT. 7. All prosecutions under this act shall be commenced within sixty days from the time when the offence is committed.

SECT. 8. This act shall take effect from and after its passage.—[March 16, 1849.

AN ACT to authorize the Towns of Dennis and Yarmouth to regulate the Fisheries in Bass River.

[1814, 134; 1815, 83; 1837, 135.]

(Ch. 37.) SECT. 1. *Be it enacted*, The towns of Dennis and Yarmouth, in the county of Barnstable, are hereby authorized and empowered, at any legal meeting of the inhabitants of said towns, to choose three persons in each town for a fish-committee, who shall be inhabitants of the town for which they are chosen, and who shall be sworn to the faithful performance of their duty. The said committees shall meet together annually, on or before

the twentieth day of April, at such time and place as a majority of them may appoint; and when so united, shall be considered a joint committee for enforcing the provisions of this act. The major part of this joint committee present at such meeting, or at any subsequent meeting before the twentieth day of April in each year, are hereby authorized and empowered to order the time, place and manner in which it may be lawful to take any of the fish called herrings or alewives and perch in Bass River, or the ponds and streams connected therewith, and may prescribe the length of the seines, nets or other instruments which may be used for taking such fish, together with the length of the lines attached thereunto; and may appoint and grant permits to suitable persons, being inhabitants of one of said towns, to catch any of the said fish in the said river, or in the ponds and streams connected therewith, and fix the compensation to be paid to the said towns for such permits; and shall determine the quantity of said fish which each family in said towns shall receive from such catchers, and establish the price therefor; and when directed by a vote of both the said towns, may sell at auction or otherwise the exclusive right of fishing in said river and its waters to one or more persons for a term of time not longer than one fishing season, at one sale, upon such terms and conditions as the said towns or said joint committee may direct.

SECT. 2. If either of the said towns of Dennis or Yarmouth shall have chosen its fish-committee according to the provisions of this act, and the other town shall neglect or refuse so to do, then the committee which is lawfully chosen shall have all the power and authority which is intended by this act to be conferred on the said joint committee.

SECT. 3. The said committee, or a majority of them, are hereby fully authorized and empowered to cause the natural streams through which the said fish pass to be kept open and without obstruction; to remove such obstructions as may be found therein, and to make the said passage-ways wider and deeper if they shall judge necessary; and the said committee, or either of them, by paying a reasonable consideration therefor, if demanded, shall have authority for these purposes to go on the land or meadows of any person through which the said streams run, without being considered as trespassers; and any person or persons who shall molest, or in any way hinder the said committee, or either of them, in the execution of the duties of their office, or shall obstruct any passage-way in the said Bass River, or in the ponds or streams connected therewith, otherwise than may be allowed by the said committee, shall forfeit and pay a fine not exceeding twenty dollars for every such offence.

SECT. 4. If any person or persons shall take any of the said fish called herrings, alewives or perch, in the said Bass River, or in the ponds and streams connected therewith, or within half a mile, in any direction, from the mouth of said river, at any time or place or in any manner other than may be allowed by the said committee, each person so offending shall for each and every such offence, upon conviction thereof, forfeit and pay a fine not exceeding ten dollars, if the quantity of fish so taken be less than one barrel, but if the quantity of fish so taken shall be one barrel or more, such person or persons so offending shall forfeit and pay for every barrel of fish so taken a sum not more than twenty dollars nor less than ten dollars.

SECT. 5. If any vessel, boat or craft shall be found within the limits of the said river or the ponds or streams connected therewith, or within half a mile of the said river's mouth, with any more of the said fish on board the same than is allowed by said committee, or if any person or persons, with any such vessel, boat or craft shall be detected in taking or in attempting to take any of the said fish in any manner different from the regulations of said committee, or with seines, nets or other instruments of a kind or size different from that established by the said committee, it shall be the duty of such committee, or either one of them, and they are hereby authorized to seize such vessel, boat or craft, seine or other instruments, and detain the same not exceeding forty-eight hours, in order that the same may be attached by due process of law, and made answerable for such fines and forfeitures incurred, with costs of suit.

SECT. 6. All fines and forfeitures incurred under this act shall go, one half to the said towns of Dennis and Yarmouth, and the other half to the person who shall prosecute for the same, excepting that when the said committee or either one of them shall prosecute, then the forfeitures shall accrue wholly to the said towns, to be recovered by complaint before a justice of the peace, or in any court competent to try the same.

SECT. 7. All laws heretofore passed regulating the fisheries in either of the towns of Dennis and Yarmouth, which are inconsistent with the provisions of this act, are hereby repealed, excepting that a fish-committee which may be chosen the present year under the provisions of any existing law, shall be considered the committee of such town under the operation of this act.

SECT. 8. This act shall take effect from and after its passage.—[March 16, 1849.

AN ACT authorizing the erection of a Fish Weir in the Town of Eastham.

(Ch. 64.) SECT. 1. *Be it enacted*, Joshua Higgings, Junior, Scotto Cobb and their associates, of Eastham, in the county of Barnstable, are hereby authorized to erect and maintain in said town, a weir for taking fish, on their land at or near a place called Cook's Brook, on the bay side of said town, extending from the upland to low-water mark: *provided*, that the said weir shall not be so constructed or maintained as to obstruct the navigation at said place.

SECT. 2. If any person shall wilfully injure or destroy said weir, or any part thereof, or shall, without leave of the owners thereof, take from the same any fish found therein, he shall, upon conviction, forfeit and pay to the use of the owners of said weir a sum not exceeding twenty dollars, to be recovered in any court of competent jurisdiction, and shall, moreover, be liable to the parties injured for all damages, in a civil suit.—[March 29, 1849.

AN ACT to prevent the Seining of Fish in the Harbors of New Bedford and Fairhaven.

[1821, ch. 97; 1869, ch. 219; 1854, ch. 293.]

(Ch. 128.) SECT. 1. *Be it enacted*, No person shall set, draw or use any seine or net in the harbors of New Bedford and Fairhaven or the waters falling into said harbors north of a line drawn due east from the almshouse in New Bedford to Fairhaven, for the purpose of taking any description of fish other than menhaden, and any person offending against the provisions

of this act, shall forfeit and pay the sum of twenty dollars for each offence, to be recovered by complaint before the justice of the police court in New Bedford, or any justice of the peace, to the use of the complainant.—[April 20, 1849.

AN ACT in addition to an Act entitled "An Act to prevent the Seining of Fish in the Harbors of New Bedford and Fairhaven."

[1821, ch. 97; 1849, ch. 128; 1854, ch. 293.]

(Ch. 219.) SECT. 1. *Be it enacted*, Nothing contained in the act entitled "An Act to prevent the seining of fish in the harbors of New Bedford and Fairhaven," passed the twentieth day of April in the year one thousand eight hundred and forty-nine, shall be construed to apply to the herring fisheries in Acushnet River, from Island Marsh, so called, in said river, northwardly, to the head waters thereof.—[May 2, 1849.

1850.

AN ACT for the protection of the Fisheries in the vicinity of Nantucket.

[1833, ch. 211; 1855, ch. 156; 1858, ch. 95. Repealed, 1870, ch. 284.]

(Ch. 6.) SECT. 1. *Be it enacted*, From and after the first day of July next it shall not be lawful for any person or persons to take any fish by seining, within one mile from the shores of Nantucket, Tuckernuck, Smith's, Muskeeket and Gravel Islands.

SECT. 2. The provisions of the sixteenth section of the fifty-fifth chapter of the Revised Statutes in regard to the town of Chatham, shall be and the same are hereby extended to the town of Nantucket.

SECT. 3. Any person violating any provisions of this act, shall forfeit and pay for each offence the sum of fifty dollars.

SECT. 4. The said town of Nantucket is hereby authorized to choose, at the annual town meeting or at any meeting duly warned for that purpose, such number of fish-wardens as may at the time be deemed necessary, who shall be sworn to the faithful discharge of their duty, whose duty it shall be to prosecute for every offence against any provisions of this act.

SECT. 5. If any boat or craft be found within or without the limits afore-named with fish of any kind on board, taken within said limits contrary to the provisions of this act, it shall be the duty of said fish-wardens to seize such boat or craft, and detain the same not exceeding forty-eight hours, in order that the same may be attached, arrested by due process of law, for the better security of the payment of the penalty for the violation of the provisions of this act, together with the costs of the suit: *provided, however*, that as soon as the master or owner of such boat or craft shall pay such penalty to the treasurer of the town of Nantucket (if he pay the same before being sued therefor), such boat or craft shall be discharged, with the effects therein.

SECT. 6. All fines and penalties recovered and received by virtue of this act, shall go, one half to the treasurer of Nantucket, for the use of said town, the other half to the complainant; and said forfeitures, fines or penalties may be recovered, together with legal costs of suit, by an action of debt, in any court of record proper to try the same.—[February 5, 1850.

AN ACT to incorporate the Great Marsh Dyking, Water-Power and Fishing Company.

(Ch. 73.) SECT. 4. *Be it enacted*, Said corporation shall have the exclusive ownership of any herring or other fishery created in consequence of the location of said dyke, together with the right of regulating such fisheries and taking the fish therein, to their own exclusive use, * * * *
—[March 14, 1850.

AN ACT to incorporate the Wequabsqua Fishing Company.

(Ch. 99.) SECT. 1. *Be it enacted*, Charles Weeks, Samuel T. Hancock, Moses A. Mayhew, Tristram Allen, Calvin O. Adams and others, their associates and successors, proprietors of the lands adjoining a pond, situated in the south part of the town of Chilmark, known by the name of Chilmark Pond, are hereby made a corporation by the name of the Wequabsqua Fishing Company, for the purpose of taking fish in the limits hereinafter specified; and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities contained in the forty-fourth chapter of the Revised Statutes, passed on the fourth day of November, one thousand eight hundred and thirty-five.

SECT. 2. All persons who are proprietors of the lands as aforesaid, shall have the right to become members, bear the expenses and share the profits, of the company, in like proportion as was the estimated value of their several meadows, according to the valuation of the commissioners of sewers, in the year one thousand eight hundred and forty-eight, to the value of the whole.

SECT. 3. The said company are hereby empowered to maintain a creek or canal from said pond, across the neck of land called Wequabsqua, to the sea, with the exclusive privilege and control of the fishery in said creek and so much of the pond as lies within ten rods from the head of the creek, and also so much of the sea or ocean from high-water mark, as lies within the distance of fifty rods from the mouth of said creek.

SECT. 4. If any person, in violation of the by-laws of said company shall take, catch or destroy any fish within the limits named in the preceding section, he shall forfeit and pay for each offence, a sum not exceeding twenty dollars nor less than five dollars, one half to the complainant and the other half to the town of Chilmark.

SECT. 5. Either of the persons named in the first section of this act, is hereby authorized to call the first meeting of the company, by causing a notification, stating the time and place of meeting and the business to be acted upon, to be published in the "Vineyard Gazette," a newspaper printed in the town of Edgartown or by giving notice to each proprietor.

SECT. 6. This act shall take effect from and after its passage.—[March 20, 1850.

AN ACT concerning the Alewife Fishery in the Town of Dennis.

[1815, 83; 1824, 107; 1837, 135; 1824, 107, modified.]

(Ch. 148.) SECT. 1. *Be it enacted*, So much of an act passed on the twenty-fourth day of February, in the year one thousand eight hundred and twenty-five, entitled "An Act in addition to an act entitled an act to pre-

vent the destruction and to regulate the catching of the fish called alewives, in their passage up the rivers and streams in the town of Harwich, in the county of Barnstable," as prevents the catching of fish called alewives, on the westward of Job Chase's Wharf, so called, situated in the town of Dennis, in the county of Barnstable, is hereby repealed.

SECT. 2. This act shall take effect from and after its passage.—[April 4, 1850.]

1851.

AN ACT to protect the Mattakeeset Herring Fishery in the Town of Edgartown.

[1826, 54; 1856, 285.]

(Ch. 77.) SECT. 1. *Be it enacted*, No person or persons shall set, draw or stretch any seine or drag-net or set up any weirs, in the Great Pond, bays, coves or creeks of said Great Pond, in the town of Edgartown, from the first day of September, annually, under a penalty of fifty dollars for each person, for each offence, to be recovered in any court proper to try the same, one half to the use of the said town, and the other half to any person who shall prosecute therefor.

SECT. 2. This act shall take effect from and after its passage.—[April 25, 1851.]

AN ACT to protect the Fisheries in the Town of Falmouth.

[1798, p. 222; 1799, p. 289; 1825, ch. 63; 1847, ch. 94; 1858, ch. 130.]

(Ch. 94.) SECT. 1. *Be it enacted*, No person shall set, draw or stretch any seine or drag-net in the Waquoit Bay, or in any of the ponds, rivers or creeks, within the limits of the town of Falmouth, under a penalty of twenty dollars nor more than one hundred dollars; to be recovered in any court proper to try the same, one half to the use of the said town, and the other half to any person who shall prosecute therefor.

SECT. 2. This act shall take effect from and after its passage.—[April 30, 1851.]

AN ACT in addition to an Act concerning Alewives in Herring River in the Town of Barnstable.

[1843, 20.]

(Ch. 116.) SECT. 1. *Be it enacted*, The inhabitants of the town of Barnstable, at their annual meeting in the month of February, shall choose one or more proper persons as a committee to regulate the taking of alewives in Herring River, at Marston's Mills, in the said town, which committee shall prescribe and make known the time, not exceeding five days in each week, and the manner and place or places where the said fish may be taken by all the inhabitants of the said town, and the said committee shall have and exercise all the powers and duties which, by the act to which this is in addition, are placed in the selectmen of the said town.

SECT. 2. The time during which the said fish shall be so taken by the inhabitants of the said town, and during which the occupants or owners of dams across the said river shall be required to keep open and maintain the passage-ways over or around their respective dams, shall not exceed thirty days in each year; and nothing contained in this act, or the act to which

this is in addition, shall be so construed as to affect the legal rights of any person.

SECT. 3. The first and fifth sections of the act to which this is in addition, and all other parts of the said act which are inconsistent with the provisions of this act, are hereby repealed.—[May 7, 1851.

AN ACT in addition to "An Act to incorporate the Pocha Pond Meadow and Fishing Company in Edgartown.

[1848, 185; 1856, 45.]

(Ch. 126.) SECT. 1. *Be it enacted*, If any person not a proprietor of this corporation, shall receive damages by the flowing of his meadows, or in the closing of the present outlet of Pocha Pond, the county commissioners of Dukes County, after the hearing of all parties interested, shall estimate the amount of damage such persons may have sustained by the said corporation and also the benefits, if any, such persons may derive by the flowing of his meadows or in closing the present outlet; which damages, if any, after deducting therefrom the benefits, said corporation shall pay; and either party if dissatisfied with any estimate made by the said commissioners, may apply for a jury to assess the damages, either at the same meeting at which such estimates shall be completed and returned, or at the next regular meeting thereof, and the like proceedings shall be had thereon as are provided for the recovery of damages for laying out highways.

SECT. 2. The fourth section of an act entitled "An Act to incorporate the Pocha Pond Meadow and Fishing Company," passed on the twenty-fifth day of April, in the year one thousand eight hundred and forty-eight is hereby repealed.

SECT. 3. This act shall take effect from and after its passage.—[May 7, 1851.

1852.

AN ACT to protect the Fisheries in the Town of Barnstable and Marshpee District.

[1839, 120.]

(Ch. 35.) SECT. 1. *Be it enacted*, No person shall set, draw or stretch any seine or drag-net in Osterville Harbor, or Popponessette Bay, or any of the waters within the limits of the town of Barnstable or Marshpee district on the southerly side, under a penalty of not less than ten dollars nor more than one hundred dollars, to be recovered in any court proper to try the same, one half to the use of the said town, and the other half to any person who shall prosecute therefor.

SECT. 2. This act shall take effect from and after its passage.—[March 15, 1852.

AN ACT to prevent the Destruction of Shad and Alewives in the Saugus River, and its Tributary Streams within the City of Lynn.

[Special Laws, v. 2, p. 504; v. 3, p. 398. 1823, 97; 1843, 187.]

(Ch. 48.) SECT. 1. *Be it enacted*, The city council of the city of Lynn is hereby empowered and directed in the month of April or May annually, to choose five persons, inhabitants of said city, to see that the laws respecting the passage-ways for shad and alewives be observed; and each person so

chosen shall be sworn to the faithful discharge of his duty. And the said committee or a major part of them are hereby authorized and empowered to order the times, places and manner in which said fish may be taken in Saugus River and streams in said city: *provided, however*, that no person shall be allowed to take said fish as aforesaid more than three days in any one week; and *provided, also*, that the taking of said fish shall not be prohibited more than four days in any one week. And the regulations which shall be so agreed upon by said committee, shall be written and posted in three public places, or published in a newspaper in said city.

SECT. 2. The said committee or a majority of the members, are hereby authorized and empowered to require of the owner or occupant of any dam or sluice-head of any mill erected, or that may be erected over said river or stream, to open and keep therein a sufficient passage-way for such fish, at such time, between the first day of April and the twentieth day of June annually, as the said committee or a major part of them shall think necessary; and may also require of the owner or occupant of any canal or course, whereby any natural stream is or shall be in part changed or altered, to leave sufficient water in the natural stream for the easy and safe passage of said fish; and upon neglect or refusal of such owner or occupant of any dam, sluice-head or canal as aforesaid, to comply with such act, the said committee or major part of them, shall and may cause sufficient passage-way and opening as they shall judge necessary, for the purposes aforesaid, to be made in such dam, sluice-head or canal, with the least prejudice to the owner or occupant, and at his expense. And such passage-way and opening shall and may be continued at the discretion of said committee, from the time they shall order the same as aforesaid, and until they shall order or permit the closing of the same, between the days above named. And if any person shall obstruct the passage-way or opening required or allowed by said committee or the major part of them, as aforesaid, or in any manner obstruct the passage of said fish, or put or cause or suffer to be put in either of said streams any noxious substance whereby said fish may be destroyed or their passage hindered, such offender shall forfeit and pay a sum not exceeding twenty dollars for each offence.

SECT. 3. If any person or persons shall be found taking any of the aforesaid fish on any day or in any place or in any manner contrary to the regulations of the said committee, or of the provisions of this act, or of otherwise killing or wasting such fish, such offender shall forfeit and pay a sum not exceeding ten dollars, nor less than one dollar for each offence.

SECT. 4. If any person not a resident of the city of Lynn, shall take any fish from either of said streams within said city, he shall forfeit and pay a sum not exceeding twenty dollars for each offence.

SECT. 5. It shall be the duty of said committee to see to the observance of this act, and they shall have authority therefor to go upon the land bordering upon the said river or streams and shall not be considered as trespassers therein. And any person who shall molest said committee or either of them, in the execution of the duties of their office, shall forfeit and pay a sum not exceeding ten dollars nor less than one dollar.

SECT. 6. All fines and forfeitures given by this act may be recovered by complaint or information in the police court of said city, and to the use of said city; and all costs incurred therein, if not otherwise recovered, shall be paid by said city.

SECT. 7. All acts and parts of acts heretofore made which are inconsistent with the provisions of this act, are hereby repealed.

SECT. 8. This act shall take effect from and after its passage.—[March 26, 1852.

AN ACT to regulate the setting of Mesh Nets in North River.

[Special Laws, v. 1, p. 269. 1814, ch. 128; 1848, ch. 116; 1853, ch. 350; 1856, ch. 83.]

(Ch. 66.) SECT. 1. *Be it enacted*, No person or persons shall set or cast any mesh-net across North River, so called, in the county of Plymouth, so as to prevent the free passage of fish up or down said river, on any days excepting Mondays, Wednesdays and Fridays of each week, from sunrise to sunset of said days.

SECT. 2. All laws restricting and regulating the setting of seines in said North River, shall apply to the setting of mesh-nets in said river.—[March 27, 1852.

AN ACT to incorporate the Flax Pond Fishing Company in Dennis.

(Ch. 68.) SECT. 1. *Be it enacted*, James Howes, William Crowell, 2d, John Gorham, their associates and successors, are hereby made a corporation by the name of the Flax Pond Fishing Company, in Dennis, and are empowered to open a brook or outlet from Flax Pond to Sesuit Creek, so called, and also improve Sesuit Creek (into which said pond empties) to the sea, so far as may be necessary for the purpose of an alewife fishery, and to regulate the same, and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities contained in the forty-fourth chapter of the Revised Statutes.

SECT. 2. If any person, without the permission of the corporation, shall take, catch or haul on shore any alewives in said pond or brook or creek or outlet so made, the person so offending shall forfeit and pay, for the use of said corporation, a sum not exceeding two dollars, if the quantity so taken be less than one barrel; but if said quantity be more than one barrel, the person so offending shall forfeit and pay for each and every barrel, five dollars, to be recovered in any court proper to try the same.

SECT. 3. If any damage shall be done by said corporation to the property of any individual, such individual shall be entitled to reasonable indemnity for the damage done him.

SECT. 4. Any inhabitant of the town of Dennis shall be entitled to the privilege of becoming a member of said corporation: *provided*, application is made therefor within three months from the passage of this act; and *provided, also*, that said applicants pay their proportion of the expenses which shall have accrued to said corporation.

SECT. 5. If the said corporation shall neglect to execute and complete the improvements provided for in this act within three years from the passage thereof, then the same shall be void and of no effect.

SECT. 6. This act shall take effect from and after its passage.—[March 27, 1852.

AN ACT to regulate the Fishery in Palmer's River.

[Special Laws, v. 3, p. 378. 1819, ch. 11; 1820, ch. 51; 1836, ch. 130; 1837, ch. 184; 1844, ch. 63.]

(Ch. 92.) SECT. 1. *Be it enacted*, From and after the passage of this act, no person, except as is hereinafter provided, shall take shad or alewives with seines or in nets in Palmer's River in the town of Rehoboth in the county of Bristol, from the first day of April to the first day of July in each year: *provided*, that the inhabitants of Rehoboth may, at a legal meeting held for that purpose, dispose, at public auction, of the privilege of taking fish for that year, with scoop-nets and seines only, in said river for the time aforesaid, to such person or persons as may offer the highest price for the same and shall give sufficient security for the payment of the purchase money, at such time and in such manner as the town shall direct.

SECT. 2. The said town may sell said privilege in sections or otherwise as the town may determine, and the purchaser or purchasers of any privilege or privileges of taking shad or alewife aforesaid, or those employed by him or them, may take any of said fish in said river between Swanzev line and the Orleans Dam, with scoop-nets, three nights in the week, beginning on Wednesday at sunset and ending on Saturday at sunrise, of each week; and may also take said fish with not more than two seines to be used at the same time, and in the daytime only, three days in each week, beginning on Thursday morning at sunrise and ending on Saturday at sunset, in any part of said river between Swanzev line and Miller's Bridge, so called, on said river in said Rehoboth: *provided, however*, that no shad or alewives shall be taken in any manner from said river after the first day of July in each year.

SECT. 3. The town of Rehoboth, at their annual meeting in March or April, may choose one or more suitable persons to serve as fish-wardens, who shall be sworn to the faithful discharge of their duties, and shall see this act enforced, and shall prosecute for all violations thereof; and it shall be the duty of the said fish-wardens to prevent and remove all obstructions in the course of the stream to the passing up and down of the fish during the season, from the first day of April to the first day of July in each year; and the said wardens or either of them, and also those who are lawfully employed in catching or buying the fish taken in said river, shall be authorized to go upon and pass over the lands of any person through or by which said river runs without being considered trespassers: *provided*, they shall so pass over or on said lands only at such times and places as the fish-wardens shall direct and prescribe and only when such passing over and on said lands shall be necessary for the purpose of protecting said fishery, and taking and selling, and shall do no more damage to said lands than is indispensable for such proper use; and any person who shall wilfully hinder or molest said wardens or any person authorized by them in the necessary clearing of said river, and in the necessary and proper use of lands on said stream, for protecting the said fishery and taking or selling the said fish, shall forfeit and pay not exceeding twenty dollars for each offence, to be recovered in the manner provided in the fourth section of this act.

SECT. 4. If any person or persons other than those who have purchased a privilege or privileges, shall fish with seine or nets at any time or in any place or manner, or shall set any nets or seines, wear or other obstruction

in said river or in any part thereof, with intent to take or destroy any shad or alewives, he shall forfeit and pay twenty dollars for each offence, to be recovered to the use of the county in which the offence was committed, or by action of debt; one half to the use of the person complaining and who shall give information that shall lead to the prosecution and conviction of any person guilty of a violation of the provisions of this act, and the other half to the use of the town in which the offence shall be committed.

SECT. 5. All laws heretofore passed relating to the fishery and fishing in Palmer's River, within the limits of the town of Rehoboth, are hereby repealed.

SECT. 6. This act shall take effect from and after its passage.—[April 3, 1852.]

AN ACT to protect Shad in Connecticut River.

[Special Laws, v. 1, p. 296; v. 2, p. 154. 1812, 103; 1835, 137. Additional Acts, 1864, ch. 62; 1868, ch. 130.]

(Ch. 122.) SECT. 1. *Be it enacted*, No person shall catch, take or destroy shad in Connecticut River after the first day of July in each year.

SECT. 2. Any person convicted of a violation of this act shall be punished by a fine not exceeding ten dollars.—[April 20, 1852.]

AN ACT to authorize John Nickerson and Eldridge Nickerson to construct a Fish-wear in Provincetown Harbor.

(Ch. 149.) SECT. 1. *Be it enacted*, John Nickerson and Eldridge Nickerson, of Provincetown, in the county of Barnstable, are hereby authorized to construct a fish-wear on the side of Long Point, in Provincetown Harbor, which flats join the uplands of the said Nickersons, with leave to extend the same as far as the tide ebbs, for the purpose of taking fish.

SECT. 2. If any person shall take any fish from said wear without the permission of said Nickersons, he shall forfeit and pay to them a sum not exceeding five dollars, if the quantity so taken be less than one hundred pounds, and five dollars for every hundred pounds so taken, to be recovered in any court proper to try the same.

SECT. 3. If any damage shall be done by said Nickersons in the construction of said wear to the property of any person, such person shall be entitled to damage, to be estimated in the same manner as damages occasioned by laying out of highways.—[April 27, 1852.]

AN ACT for the Regulation and Protection of the Alewife Fishery in the Towns of Cohasset and Scituate.

(Ch. 151.) SECT. 1. *Be it enacted*, The selectmen of the towns of Scituate and Cohasset, and their successors, shall be a committee for the purpose of protecting, regulating and improving the alewife fishery in the stream running from Scituate Pond into Cohasset Harbor, on or near the boundary line between the towns of Scituate and Cohasset, and shall have full powers for these purposes; they shall annually dispose of said fishery for the term of one year, and no longer, after proper notice, at public sale; they may make improvements in and remove obstructions from said stream for the purposes aforesaid. The expense of such improvements and removals shall, with the exceptions of sluice-ways in dams, as hereinafter provided, be

borne equally by the towns of Scituate and Cohasset; and said towns are hereby empowered to raise money for this purpose. The proceeds of said fishery shall be equally divided between the two towns.

SECT. 2. The acts of a majority of said committee shall be valid: *provided*, reasonable notice of all meetings shall be given to every member of the same; and *provided*, that at least one member from each town shall be present.

SECT. 3. All persons excepting those purchasing the right from said committee as aforesaid, or employed by such purchasers, who shall take any of said fish from said stream, in any part of it, from Doane's Mill, so called, upward, shall forfeit the sum of ten dollars for every offence to the use of said purchasers, who may recover the same by an action at law.

SECT. 4. The owner or occupier of every dam on said stream shall annually, between the first day of March and the first day of June next following, for such term of time and in such manner as said committee shall direct, open a sufficient passage for said fish through said dam; and on failure to open such passage, or of continuing it open as aforesaid, shall forfeit and pay the sum of one hundred dollars; and said committee may open such passage when neglected as aforesaid, at the expense of the owner or occupier thereof: *provided*, that no more damage is thereby done said owner or occupier than is necessary to effect said purpose.

SECT. 5. Any member of said committee may be a witness in any legal proceeding touching said fishery.

SECT. 6. The said committee shall regulate the times, places and manner of taking said fish: *provided*, that no fish shall be taken on more than four days of any one week; and the said purchasers shall conform to such regulations, on penalty of not less than twenty nor more than one hundred dollars for each offence.

SECT. 7. The said committee shall receive out of the proceeds of said fishery one dollar and twenty-five cents each for every day's actual service in performing the duties herein required of them.

SECT. 8. All fines and forfeitures named in this act, and not otherwise appropriated, shall be equally divided between the towns of Scituate and Cohasset, and they may join in a suit for the same.

SECT. 9. This act shall take effect from and after its passage.—[April 27, 1852.

1853.

AN ACT to incorporate the Magonsett Fishing Company.

(Ch. 53.) SECT. 1. *Be it enacted*, Charles S. Nye, James Witherell and Charles O. Nye, citizens of North Falmouth, their associates and successors, are hereby made a corporation by the name of the Magonsett Fishing Company, and are empowered to regulate the brook running from Dam Pond, so called, to Wild Harbor, in said Falmouth, so far as is necessary for the purpose of an alewife fishery; and for this purpose shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. If any person, without the permission of the corporation, shall take, catch or haul on shore any alewives in said brook, or within one-eighth of a mile in any direction from the mouth of said brook, he shall

forfeit and pay for the use of said corporation, a sum not exceeding two dollars, if the quantity so taken be less than one barrel; but if the quantity so taken be more than one barrel, the person so offending shall forfeit and pay for each barrel of fish so taken five dollars, to be recovered in any court proper to try the same.

SECT. 3. If any damage shall be done by said corporation to the property of any individual, not a member of the corporation, such individual shall be entitled to reasonable damage, to be estimated in the same manner as damages occasioned by the laying out of highways.

SECT. 4. This act shall take effect from and after its passage.—[March 17, 1853.]

AN ACT in addition to an Act entitled "An Act concerning Alewives in Herring River, in the Town of Sandwich."

[1834, 126; 1854, 285.]

(Ch. 95.) SECT. 1. *Be it enacted*, If any person or persons shall take any of the fish named in said act, in said Herring River, or the ponds in which said fish cast their spawn, at any time, or in any place or manner other than shall be allowed by the selectmen of said town of Sandwich, each person so offending shall, for each and every such offence, on conviction thereof before any justice of the peace, in the county of Barnstable, pay a fine not exceeding twenty dollars nor less than one dollar, or shall be imprisoned in the county jail of said county for a time not exceeding sixty days, at the discretion of the justice before whom the trial may be had.—[March 26, 1853.]

AN ACT to abolish the office of Commissioner of Marshpee.

[1834, ch. 166; 1849, ch. 36.]

* * * * *

(Ch. 186.) SECT. 5. *Be it further enacted*, The said district at any regular meeting, with notice in the warrant that the subject will be acted on, may authorize the selectmen of said district to lease or dispose of the herring or trout fishery, belonging to said district, from time to time, for terms of time not exceeding five years in any one lease, the proceeds to go into the treasury for the benefit of the district; and they may elect or appoint two or more fish-wardens to protect said fishery: *provided*, the same is not repugnant to the laws of the Commonwealth.

* * * * *

SECT. 8. This act shall take effect from and after its passage.—[April 23, 1853.]

AN ACT to equalize and protect the Fishery on the North River, so called, in the County of Plymouth.

[Special Laws, v. 1, p. 269. 1814, 218; 1848, 116; 1852, 66. Additional Act, 1856, ch. 83.]

(Ch. 350.) SECT. 1. *Be it enacted*, The inhabitants of the town of Pembroke are hereby permitted to take fish at the weir where they have usually caught them on the North River, so called, or stream leading to the Indian Ponds, so called, in said town, or on the following days in each week: Tuesday, Wednesday, Thursday and Friday, from sunrise on Tuesday to

sunset on Friday, inclusive, and at no other time, under a penalty of fifty dollars for each and every day fish are taken from said weir, contrary to the provision of this act, to be paid by the town of Pembroke as follows: one-quarter part of the said fifty dollars to the person making the complaint, and three-quarters of the same to be paid to the towns of Marshfield, Scituate and South Scituate, in the proportion to the number of their inhabitants by the census last taken.

SECT. 2. No person or persons shall take fish from the stream leading from said North River to the said Indian Ponds or streams tributary to the North River, excepting at the weir before mentioned, at any time between the tenth day of April and the fifteenth of May inclusive, of each year, under a penalty of twenty dollars for each and every offence, which shall be paid as follows: one half of the twenty dollars to the complainant, and the other half to the said town of Pembroke.

SECT. 3. It shall be lawful for the inhabitants of the several towns situated on said North River, to take fish with ten seines only, in the manner following, to wit: the towns of Pembroke, Scituate and South Scituate, shall each have the right of disposing at public auction, for their own benefit, of the privilege of catching fish with two seines only, and the town of Marshfield shall have the right of disposing at public auction, for their own benefit, of the privilege of catching fish with four seines only, in the river aforesaid.

SECT. 4. Any person or persons who may by seine or mesh-nets, take fish from the said North River, except such persons as have authority under this act, shall each forfeit and pay for each and every time they so trespass, the sum of twenty dollars to the town within whose limits the same were taken.

SECT. 5. The proprietors of any and all mills located on the North River, and streams leading from said North River to the said Indian Ponds, so called, in the county of Plymouth, shall take up the waste-ways of said mills in each year, on or before the tenth day of April, and keep the same up to the fifteenth day of May following, that the fish shall not be obstructed in their passage to the said Indian Ponds from the said North River; and in the neglect or failure of a proprietor of any mill to take up the waste-ways, so called, and keep the same up for the before mentioned time, he shall forfeit and pay for each and every day of such neglect, the sum of one hundred dollars to the towns of Marshfield, Scituate, South Scituate and Pembroke, in the proportion to their number of inhabitants.

SECT. 6. Any expense that may accrue in removing obstructions or clearing the streams leading from the North River to the Indian Ponds, for the preservation of the fish, with the exception of taking up the waste-ways of mills, shall be borne by the several towns of Marshfield, Scituate, South Scituate and Pembroke in the proportion to their inhabitants, who are hereby permitted to raise money for the same.

SECT. 7. All penalties and forfeitures under this act may be recovered in any court competent to try the same.

SECT. 8. All acts and parts of acts inconsistent with this act, are hereby repealed.

SECT. 9. This act shall take effect from and after its passage.—[May 19, 1853]

AN ACT in addition to an Act to establish the Fishery in Agawam and Half-way Pond Rivers.

[1838, 19; 1844, 65. Additional Acts, 1860, ch. 89; 1863, ch. 117.]

(Ch. 377.) SECT. 1. *Be it enacted*, If any person or persons shall use any seine or drag-net for the taking of fish in the Agawam and Half-way Pond Rivers between the first day of March and the first day of October, he or they shall each forfeit and pay to the towns of Plymouth and Wareham twenty dollars for each and every offence; and shall also forfeit such seine or drag-net, together with such boat or boats as may be used to work the same.

SECT. 2. All forfeitures under this act shall be collected in the same manner and disposed of in the same way, as forfeitures under the act passed February twenty-sixth, eighteen hundred and thirty-eight, to which this is in addition.

SECT. 3. If the committee annually chosen by the towns of Plymouth and Wareham, shall fail by neglect or disagreement to fix the time and prescribe the manner in which the owner or occupier of any dam on said rivers shall open a sufficient passage for said fish through said dam, then and in that case, the committee of either town, who may feel aggrieved thereby, may apply to the county commissioners, of the county of Plymouth, who, after due notice to the committee of the other town, shall have the same power now vested in said committee to fix the time and prescribe the manner in which the owner or occupier of any dam on said rivers shall open a sufficient passage for said fish through said dam; and the owner or occupier of any dam on said rivers, who shall fail to comply with the order of said commissioners therein, shall be liable to the same penalties as they are now liable to for failing to comply with the order of said committee, to be recovered in like manner. And said county commissioners shall have the same power which said committee now possess, to open said dam when neglected as aforesaid. And if either of the county commissioners shall reside in either of the towns of Plymouth or Wareham, his place shall be supplied by one of the special commissioners not resident in either of said towns.

SECT. 4. All acts and parts of acts inconsistent with this act are hereby repealed.

SECT. 5. This act shall take effect from and after its passage.—[May 19, 1853.

1854.

AN ACT to secure an Alewife Fishery at West Sandwich.

(Ch. 231.) SECT. 1. *Be it enacted*, Isaac Keith, of Sandwich, in the county of Barnstable, his heirs and assigns, shall have the exclusive right to take and catch fish in the stream or creek known as Scusset River, and leading into the mill-pond in West Sandwich, on Monday, Wednesday, Friday and Saturday in each week, and at no other time: *provided*, that the said Isaac Keith, his heirs or assigns, shall open a good and sufficient passage-way around the dam or dams erected on said stream, to enable the fish to go into said mill-pond to spawn, and maintain and keep the said passage-ways open and unobstructed, from the tenth day of April to the twentieth day of May inclusive, in each year.

SECT. 2. Any person or persons taking fish from said stream or pond without the consent of the said Isaac Keith, his heirs or assigns, shall forfeit and pay for each and every offence the sum of ten dollars, one half of the forfeiture to be paid to the person making the complaint, the other half to be paid to the said Isaac Keith, his heirs or assigns, to be recovered in any court competent to try the same.—[April 7, 1854.]

AN ACT concerning the Alewife Fishery in Herring River in the Town of Sandwich.

[1834, ch. 126; 1853, ch. 95.]

(Ch. 285.) SECT. 1. *Be it enacted*, The Herring Pond tribe of Indians shall be entitled to fish on the west bank of the river known as Herring River in the town of Sandwich, in their ancient way, above the weir established on said river, to the land belonging to the heirs of Nathan B. Gibbs, deceased, on those days prescribed by the selectmen of said town, agreeably to an act passed on the twenty-seventh of March in the year one thousand eight hundred and thirty-four; and also to receive from the town of Sandwich, two barrels for each family, annually.

SECT. 2. This act shall take effect from and after its passage.—[April 12, 1854.]

AN ACT concerning Seine Fishing in the Harbor of New Bedford.

[1849, chs. 128, 219.]

(Ch. 293.) SECT. 1. *Be it enacted*, Instead of the limits prescribed in the act of April twentieth, one thousand eight hundred and forty-nine, for the use of any seine or net in the harbors of New Bedford and Fairhaven, the following limits are hereby prescribed, namely: from a point called Butler's Rock on New Bedford shore, to the beacon on Egg Island, thence on a course north-east by east to the Fairhaven shore; and so much of the above mentioned act as authorizes seining for menhaden, and all other parts thereof inconsistent with the provisions of this act, are hereby repealed.

SECT. 2. This act shall take effect from and after its passage.—[April 13, 1854.]

1855.

AN ACT in addition to an Act to protect the Alewife Fishery in the Town of Brewster.

[1813, ch. 115.]

(Ch. 39.) SECT. 1. *Be it enacted*, That the inhabitants of the town of Brewster be and are hereby authorized to prohibit all obstructions to the passage of alewives and also to prevent the catching of the same by any person or persons other than those said town may direct, within the distance of one-fourth of a mile east of the mouth of Mill Creek or the outlet of Stony Brook, so called, in Brewster Bay, and on the west from said boundary to the line of the town of Dennis, from the twentieth of April to the twentieth of June: *provided*, such prohibition shall not affect the right to take other kinds of fish within the time and limits named in this section.

SECT. 2. Any person causing obstructions or found taking alewives within said limits without the authority of said town, shall be liable to a penalty not exceeding twenty dollars for each offence, to be recovered in any court competent to try the same, to the use of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[March 9, 1855.]

AN ACT to authorize Augustus Paine and Timothy Jarvis to construct Fish-weirs and Fixtures in the Town of Brewster.

(Ch. 51.) SECT. 1. *Be it enacted*, That Augustus Paine and Timothy Jarvis, inhabitants of the town of Brewster, be and are hereby authorized to construct fish-weirs and the usual fixtures for taking fish on the lands of said Paine and Jarvis in said Brewster: *provided*, said weirs and fixtures shall not be placed within one-fourth of a mile from the entrance of Stony Brook, so called, in Brewster Bay. Said weirs and fixtures shall all be within the limits of the town of Brewster, and shall cause no obstruction to navigation.

SECT. 2. Any person obstructing the provisions of the first section of this act, or taking fish from said weirs without the authority of said Paine or Jarvis, shall be liable to a penalty of a sum not exceeding fifteen dollars for each offence, to be recovered in any court competent to try the same, to the use of the person who shall prosecute therefor.

SECT. 3. This act shall take effect on and after its passage.—[March 14, 1855.]

AN ACT to authorize Samuel Young, of Chatham, to construct a Fish-weir.

(Ch. 75.) SECT. 1. *Be it enacted*, Samuel Young of Chatham, is hereby authorized to construct a fish-weir on the north side of the new harbor, on the flats adjoining Nauset Beach, in the town of Chatham in the county of Barnstable: *provided*, said fish-weir shall cause no obstruction to navigation nor infringe on the rights of others.

SECT. 2. Any person or persons unlawfully taking fish from said weir, or obstructing the passage of fish into said weir, or causing damage thereto, shall be liable to a penalty of twenty dollars, to be recovered in any court competent to try the same, for the use of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[March 24, 1855.]

AN ACT to authorize Thomas L. Eldridge and his Associates to construct a Fish-weir.

(Ch. 84.) SECT. 1. *Be it enacted*, Thomas L. Eldridge and his associates are hereby authorized to construct a fish-weir and other necessary fixtures in the tide-waters at a place where the channel that runs southerly from Broad Creek, so called, unites with the Crooked Channel, so called, in the southeasterly part of Orleans, in the county of Barnstable, for the purpose of taking fish: *provided*, that the said weir shall not be so constructed or maintained as to obstruct the navigation at said place or infringe on the rights of others.

SECT. 2. If any person shall wilfully injure or destroy said weir, or any part thereof, or shall, without leave of the owners thereof, take from the same any fish found therein, he shall, upon conviction, forfeit and pay to the use of said owners of said weir, a sum not exceeding twenty dollars, to be recovered in any court of competent jurisdiction, and shall moreover be liable to the parties injured for all damages in a civil suit.

SECT. 3. This act shall take effect from and after its passage.—[March 24, 1855.]

AN ACT to authorize Thomas Sparrow and his Associates to construct a Fish-weir.

(Ch. 88.) SECT. 1. *Be it enacted*, Thomas Sparrow and his associates, in the town of Chatham, are hereby authorized to construct a fish-weir, commencing on the westerly shore of Monomory Beach, in said Chatham, at the south side of Steward's Hole, so called, and to extend said weir not more than eight hundred yards in a westerly direction into Chatham Bay, in Barnstable County, with all the privileges thereto attached: *provided*, that said weir shall cause no obstruction to navigation or infringe on the rights of others.

SECT. 2. If any person shall wilfully injure or destroy said weir, or any part thereof, or shall, without leave of the owners thereof, take from the same any fish found therein, he shall, upon conviction, forfeit and pay to the use of the owners of said weir, a sum not exceeding twenty dollars, to be recovered in any court of competent jurisdiction, and shall moreover be liable to the parties injured for all damages, in a civil suit.

SECT. 3. This act shall take effect from and after its passage.—[March 26, 1855.]

AN ACT to authorize Barnabas W. Eldridge, Francis Joseph, Canada Perry, and their Associates, to build a Fish-weir.

(Ch. 90.) SECT. 1. *Be it enacted*, Barnabas W. Eldridge, Francis Joseph, Canada Perry, and their associates, are hereby authorized to construct a fish-weir near Kilt Pond Point, so called, on the south shore of the town of Dennis, in the county of Barnstable: *provided*, said weir shall cause no obstruction to navigation nor encroach on the rights of others.

SECT. 2. Any person or persons unlawfully taking fish from said weir or obstructing the passage of fish into said weir, or causing damage thereto, shall be liable to a penalty of twenty dollars, to be recovered in any court competent to try the same, for the use of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[March 26, 1855.]

AN ACT to authorize Ira Wixon and Elijah Whittemore to construct a Fish-weir.

(Ch. 125.) SECT. 1. *Be it enacted*, That Ira Wixon and Elijah Whittemore are hereby authorized to construct a fish-weir near Hill Pond Point, so called, in the town of Dennis, in the county of Barnstable: *provided*, said weir shall cause no obstruction to navigation nor encroach on the rights of others.

SECT. 2. All persons unlawfully taking fish from said weir, or causing obstructions to the passage of said fish to said weir, or causing damage thereto, shall be liable to a penalty of twenty dollars, to be recovered in any court competent to try the same, for the benefit of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[March 31, 1855.]

AN ACT to authorize Eleazer Rogers, Jr., and his Associates, to build a Fish-weir.

(Ch. 154.) SECT. 1. *Be it enacted*, Eleazer Rogers, Jr., and his associates, are hereby authorized to construct a fish-weir near the mouth of the Crooked Channel, where it unites with the Little Bay, so called, in the south-easterly part of the town of Orleans, in the county of Barnstable, for the purpose of taking fish: *provided*, said weir shall cause no obstruction to navigation nor encroach on the rights of others.

SECT. 2. All persons unlawfully taking fish from said weir, or causing obstruction to the passage of fish to said weir, or causing damage thereto, shall be liable to a penalty of twenty dollars for each and every offence, to be recovered in any court competent to try the same, for the benefit of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[April 9, 1855.]

AN ACT in addition to an Act to regulate the Fisheries in the vicinity of Nantucket.

[1833, 211; 1850, 6. Additional Act, 1858, ch. 95. Repealed, 1870, ch. 234.]

(Ch. 156.) SECT. 1. *Be it enacted*, The penalty imposed in third section of the act of February fifth, in the year eighteen hundred and fifty, to which this is in addition, shall be so amended as to make the sum not to exceed five hundred dollars, to be recovered in any court competent to try the same, for the use of the town of Nantucket.

SECT. 2. The provisions of this act shall take effect from and after its passage.—[April 9, 1855.]

AN ACT to authorize Jesse Tuttle and his Associates to construct a Fish-weir in the Town of Harwich.

(Ch. 162.) SECT. 1. *Be it enacted*, Jesse Tuttle and his associates are hereby authorized to construct a fish-weir on the flats east of Andrew's River, so called, in that part of Harwich called South Harwich, in the county of Barnstable, for the purpose of taking fish: *provided, however*, said weir shall cause no obstruction to navigation nor encroach on the rights of others.

SECT. 2. All persons unlawfully taking fish from said weir, or causing obstructions to the passage of fish to said wier, or causing damage thereto, shall be liable to a penalty of twenty dollars for each and every offence, to be recovered in any court competent to try the same, for the benefit of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[April 10, 1855.]

AN ACT to protect the Fisheries in Ipswich River.

[Special Laws, v. 1, pp. 191, 451; v. 2, p. 123; v. 3, p. 524. 1805, ch. 29; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22; 1824, ch. 101; 1825, ch. 73; 1829, ch. 40; 1839, ch. 134; 1843, ch. 79; 1856, chs. 14, 52, 243.]

(Ch. 171.) SECT. 1. *Be it enacted*, The inhabitants of the town of Ipswich and vicinity, in the county of Essex, may, at all times take fish from Ipswich River in said town, with dip-nets, Sundays excepted.

SECT. 2. No person shall set, draw or stretch any seine or drag-net in any part of the waters in Ipswich River, within the limits of said town,

under a penalty not exceeding fifty dollars, to be recovered in any court competent to try the same, for the use of said town.

SECT. 3. This act shall take effect from and after its passage.—April 10, 1855.

AN ACT to authorize William W. Eldridge, Jonathan Eldridge and Warren N. Rogers to construct a Fish-weir.

(Ch. 173.) SECT. 1. *Be it enacted*, William W. Eldridge, Jonathan Eldridge and Warren N. Rogers are hereby authorized to construct a fish-weir in the tide-waters near Clam Point, so called, in the easterly part of the town of Harwich in the county of Barnstable, for the purpose of taking fish: *provided*, said weir shall cause no obstruction to navigation nor encroach on the rights of others.

SECT. 2. All persons unlawfully taking fish from said weir, or causing obstructions to the passage of fish to said weir, or causing damage thereto, shall be liable to a penalty of twenty dollars, to be recovered in any court competent to try the same, for the use of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[April 10, 1855.

AN ACT to prohibit Seining in Apponigansett River and Creeks.

(Ch. 175.) SECT. 1. *Be it enacted*, No person shall set, draw or use any seine for taking fish in Apponigansett River in the town of Dartmouth in the county of Bristol, or its tributaries, north of a line running south-west from Ricketson's Point across said river.

SECT. 2. Any person violating this act shall, on conviction, pay a fine of not less than fifteen nor more than fifty dollars, to be recovered by any court competent to try the same, for the use of said town.

SECT. 3. This act shall take effect on and after its passage.—[April 14, 1855.

AN ACT to protect the Fisheries in the Towns of Danvers and Beverly.

(Ch. 208.) SECT. 1. *Be it enacted*, The inhabitants of the towns of Danvers and Beverly and vicinity, in the county of Essex, may at all times take fish from Porter's, Crane and Waters Rivers, so called, situated within and between the towns above named, in any manner except that prohibited in the following section.

SECT. 2. If any person or persons shall take any fish in either of the rivers named in the first section, by the use of a seine or weir, above a point designated in the third section, he or they shall, for each offence, on conviction thereof, pay a fine not exceeding fifty dollars, the fines and forfeitures to be recovered in any court proper to try the same, one half to the use of the town in which the offence is committed, the other half to the use of him who shall prosecute therefor.

SECT. 3. It shall be lawful for any person or persons whatever to take fish in any manner below a point called Horse Pasture Point situated in the town of Danvers, and on the westerly side of Bass River, and near or below the mouths of the rivers named in the first section of this act.

SECT. 4. This act shall take effect from and after its passage.—[April 18, 1855.

AN ACT to authorize the construction of a Fish-weir in the Town of Yarmouth.

(Ch. 212.) SECT. 1. *Be it enacted*, George Weaver and his associates are hereby authorized to construct a fish-weir in the tide-waters of Lewis Bay, so called, in the town of Yarmouth in the county of Barnstable, for the purpose of taking fish: *provided*, said weir shall cause no obstruction to navigation nor encroach on the rights of others.

SECT. 2. All persons unlawfully taking fish from said weir, or causing obstructions to the passage of said fish to said weir, or causing damage thereto, shall be liable to a penalty of twenty dollars for each offence, to be recovered in any court competent to try the same, for the benefit of the person who shall prosecute therefor.

SECT. 3. This act shall take effect from and after its passage.—[April 18, 1855.]

AN ACT to protect the Fisheries in the Town of Chilmark.

(Ch. 272.) SECT. 1. *Be it enacted*, Abner Mayhew, George Mayhew, and their associates, are hereby authorized and directed to build and maintain a good and suitable fish-way, both for ingress and egress, through the creek leading to Squipnocket Pond, so called, in the town of Chilmark in the county of Dukes, during the usual season for the passage of fish through said creek.

SECT. 2. Any person causing obstruction to the passage of fish through said creek named in the first section of this act, shall be liable to a penalty of twenty dollars for each and every day such obstructions shall wilfully be allowed to remain during the season named in the first section of this act, to be recovered in any court competent to try the same, for the use of the person who shall sue for the same.

SECT. 3. This act shall take effect from and after its passage.—[May 2, 1855.]

AN ACT authorizing the Selectmen of the Town of Falmouth to permit Seines to be used in certain Ponds.

[Special Laws, v. 2, pp. 222, 289. 1847, 94.]

(Ch. 279.) SECT. 1. *Be it enacted*, The selectmen of the town of Falmouth in the county of Barnstable, and their successors, are hereby authorized to permit seines to be used at their discretion (said permits to be given in writing), between the first day of December and the following first day of April in each year, in the following ponds, viz.: "Bowman's Pond," "Little Pond" and "Perch Pond."

SECT. 2. Any person or persons detected in using or shooting any seine or seines for the purpose of taking fish in any of the ponds named in the foregoing section, without the permission of the selectmen as provided in said section, shall be subject to a fine of not less than five dollars nor more than one hundred for every such offence, to be recovered before any court competent to try the same, one half of said fine to accrue to the use of said town, the other half to the person complaining.

SECT. 3. The selectmen aforesaid shall determine, so far as shall appear to them advisable, in what manner any fish taken from said ponds by their

permission, shall be disposed of, so far as to secure to the inhabitants of said town of Falmouth a supply of fish so taken.

SECT. 4. All acts and parts of acts inconsistent herewith, are hereby repealed.

SECT. 5. This act shall take effect from and after its passage.—[May 2, 1855.

AN ACT in addition to "An Act to incorporate Trap's Creek Fishing Company, in Edgartown."

[1839, 83; 1843, 47.]

(Ch. 299.) SECT. 1. *Be it enacted*, The owners of Trap's Creek Fishing Company in the town of Edgartown, in the county of Dukes, their associates and successors, are hereby authorized to catch all kinds of fish by seine or otherwise, in Trap's Pond, from the first day of November to the first day of April, in each year.

SECT. 2. If any person shall set, stretch or drag a seine in said pond, except as above provided, without the consent of said proprietors, he shall forfeit and pay to the use of the aforesaid company the sum of twenty dollars for each offence, and an additional sum for each and every barrel of perch so taken, to be recovered by indictment, or on complaint before any justice of the peace.

SECT. 3. No person, whether a proprietor or not, shall be allowed to seine perch in said pond, from the first day of April to the first day of November, in each year.

SECT. 4. Nothing herein contained shall prevent any inhabitant of this Commonwealth from catching perch in said pond with hook and line, at any time.

SECT. 5. All acts and parts of acts inconsistent with the provisions of this act, are hereby repealed.

SECT. 6. This act shall take effect from and after its passage.—[May 4, 1855.

AN ACT to protect the Fisheries in the Town of Harwich.

[1844, ch. 67.]

(Ch. 301.) SECT. 1. *Be it enacted*, Obed Brooks, Jr., and his associates and successors in the town of Harwich, in the county of Barnstable, are hereby authorized to remove all obstructions in the brook or stream called Coy's Brook, from the branch of Herring River (so called), near Hall's Island to Clark's Pond and Flax Pond, for the purpose of propagating and catching herrings or alewives, for the sole use and benefit of said Brooks and his associates: *provided*, that no individual's rights or privileges shall be infringed thereby.

SECT. 2. All persons illegally taking fish from said ponds or said brook or stream, or causing obstructions to the passage of fish or alewives to or from said ponds, shall be liable to a penalty of not less than two dollars or more than twenty dollars for each offence, to be recovered in any court competent to try the same, for the use of the person who shall sue therefor.

SECT. 3. This act shall take effect from and after its passage.—[May 4, 1855.

AN ACT to regulate the Fisheries of the Oyster Pond River Company in the Town of Falmouth.

(Ch. 324.) SECT. 1. *Be it enacted*, William Gifford, Stephen Dillingham, their associates and successors, in the town of Falmouth in the county of Barnstable, are hereby authorized, under the name of the Oyster Pond River Company, to regulate the river running from Oyster Pond to Hogg Island Harbor, so far as is necessary for an alewife fishery; said company to have sole control and benefit of said fishery: *provided*, that no individual rights shall be infringed thereby.

SECT. 2. All persons unlawfully taking fish from said pond or river, or causing obstructions to the passage of said fish to or from said pond or river, shall be liable to a penalty of not less than two nor more than twenty dollars, to be recovered in any court competent to try the same, for the use of the person who shall sue therefor.

SECT. 3. This act shall take effect from and after its passage.—[May 10, 1855.

AN ACT to authorize the Town of Nantucket to regulate the Fisheries in all the Ponds, Creeks and Harbors in the County of Nantucket.

(Ch. 337.) SECT. 1. *Be it enacted*, The town of Nantucket is hereby authorized and empowered, at any legal meeting of the inhabitants of said town, to make such by-laws as may be deemed expedient to preserve and protect the fisheries in all the ponds and creeks within the county of Nantucket: *provided*, such by-laws do not infringe on the rights of any person.

SECT. 2. This act shall take effect on and after its passage.—[May 15, 1855.

AN ACT to regulate the Fisheries in Taunton Great River and the Newmarket River.

[Special Laws, v. 1, pp. 313, 354, 422; v. 2, pp. 192, 381, 469; v. 3, appendix, p. 20. 1815, 111, 119; 1818, 106; 1819, 133, 137; 1822, 38; 1829, 55; 1832, 44, 120; 1833, 137; 1843, 73; 1844, 62. Additional Acts, 1863, ch. 73; 1866, ch. 54; 1871, ch. 258.]

(Ch. 401.) SECT. 1. *Be it enacted*, From and after the passage of this act it shall not be lawful for any person or persons to catch shad or alewives in any manner, in Taunton Great River or in Newmarket River, from the first day of March to the tenth day of June, including both of said days in each year, except as hereinafter provided in this act.

SECT. 2. The several cities and towns hereafter in this section named, shall annually, in legal meeting to be held for that purpose, on or before the fifteenth day of November in each year, sell at public auction, to the highest bidder who shall give satisfactory security for the payment therefor, for the benefit of said cities and towns respectively, the privilege of taking shad and alewives in Taunton Great River, between the days aforesaid and including those days, in the year next succeeding such sale, with the number of seines following: the city of Fall River and town of Free-town may each sell the privilege of fishing with one seine for the purpose aforesaid; the towns of Somerset, Dighton, Berkley and Raynham may each sell the privilege of fishing with two seines for the purpose aforesaid; and the town of Taunton may sell the privilege of fishing with three seines for the purpose aforesaid, which privileges of fishing shall be sold sepa-

rately, and the purchaser or purchasers thereof may locate and use the privilege or privileges by him or them obtained at any such sale, at any place upon Taunton Great River which he or they may select or procure, with the consent of the owner or owners of the shore on which such location or locations may be made.

SECT. 3. No seine that shall be used for the purpose of fishing in said Taunton Great River in the towns of said Taunton and Raynham, and in the towns of Berkley and Dighton above Rocky Point, shall be more than twenty rods in length; and no seine that shall be used for such purpose in said towns of Berkley and Dighton below Rocky Point, shall be more than thirty-five rods in length; and no seine that shall be used for such purpose in the towns of Somerset, Freetown or the city of Fall River, shall be more than forty rods in length. And no shad or alewives shall be taken by any instrument or means at any time within one mile and a half of the dam near "King's Bridge," so called, in Squawbetty Village.

SECT. 4. No seine shall be allowed to be set or to remain in said Taunton Great River for any longer time than is necessary to cast the same and haul it immediately to the shore. And no seine or other obstruction to hinder the fish going up shall be put in the river below the dam at Squawbetty Village during the time not allowed for fishing, hereinafter mentioned. And all locations that shall be made on the shore of said river for the purpose of fishing shall have the upper and lower limit thereof designated by some proper object on the shore, which shall not be changed during any one fishing season; and such locations shall be forty rods in length above Rocky Point, and forty-five rods in length below Rocky Point. And no seine shall be swept without the compass of two parallel lines drawn, the one from a point ten rods above the upper limit, and the other from a point ten rods below the lower limit of all locations above Rocky Point, and at right angles with a line drawn from such upper and lower limits; or without the compass of two parallel lines drawn, the one from a point thirty rods above the upper limit, and the other from a point thirty rods below the lower limit of all locations below Rocky Point, and at right angles with a line drawn from such upper and lower limits; all said distances above and below to be measured on the shore of said river. And no seine shall be swept more than fifty rods in the river above Rocky Point, or more than seventy-five rods in the river below Rocky Point, at any one sweep.

SECT. 5. No shad or alewives shall be taken in any part or Taunton Great River or the Newmarket River, between the hours of nine o'clock on Friday evening of each week and four o'clock on Monday morning succeeding, from the first day of March to the tenth day of June in each year hereafter, including both of said days; and no shad or alewives shall be taken in Taunton Great River above Berkley and Dighton Bridge, between the hours of twelve o'clock in the night following Thursday of each week, and four o'clock on Monday morning succeeding, from the first day of March to the tenth day of June in each year, including both of said days.

SECT. 6. The several purchasers of the privileges aforesaid shall select the place where they intend to use the same for the purpose of catching shad and alewives, and shall file a certificate of such selection, and the location thereof, with the clerk of the city or town within which such location shall be made, on or before the first day of March in each year here-

after. And the purchaser or purchasers so locating said privileges shall have the right to catch shad and alewife in Taunton Great River for the time named in the first and fifth sections of this act, at their respective locations to be made as aforesaid, and no other persons except the assistants of such purchaser or purchasers.

SECT. 7. No person shall set any seine, net, weir or other hindrance or obstructions in or across said river or any part thereof, or in any of the waters connected therewith, except in the mouth of Broad Cove, so called, in the towns of Dighton and Somerset; nor shall any person at any place on said waters, drive or pursue with any boat or boats, contrary to the intent and meaning of said act, any shad or alewives; nor shall any person beat or whip the said waters with any instrument or thing, or throw into said waters any earth or other substance or thing whereby said fish shall be hindered, disturbed, destroyed, driven or delayed, during the time named in the first section of this act. And if any person shall be found fishing with any seine, net or other instrument, contrary to the provisions of this act, and if any person shall be found having or conveying away in any building, boat or vessel, or in any cart or other vehicle, any fish taken in violation of the provisions of this act, knowing the same to be so taken, it shall be lawful for any fish-warden, chosen in pursuance of the ninth section of this act, to enter any such building and take to his own use all such fish and any such seine, net or other instrument, any such boat, vessel, cart or other vehicle, without any warrant other than is given by the provisions of this section.

SECT. 8. The inhabitants of the towns of Middleborough and Lakeville shall have the whole control and management of the fisheries on the Newmarket River, and shall have the right to catch, by their committees or their agents duly chosen in legal meetings, or to sell the right of catching, shad or alewives by set-nets or dip-nets, during the time named in the first section of this act, at any three places within the limits of said towns, to be designated for each year by said towns in legal meetings, each of such rights to be used only from four o'clock on Monday morning to nine o'clock on Friday evening of each week, and at no other time or places during the period named in said first section. And the net proceeds of such fishery or sales shall be divided between the said towns of Middleborough and Lakeville, in proportion to the number of ratable polls in each respectively, and the respective parts of such proceeds shall be disposed of by said towns respectively in such manner and for such purposes as each town shall for itself determine and direct.

SECT. 9. The several towns aforesaid, at their annual meetings in the months of March or April, and the mayor and aldermen of any city upon said river, at any meeting, shall choose, by ballot, each, three or more persons for fish-wardens, whose duty it shall be to see that this act is enforced, and prosecute for all breaches or violations thereof; and each fish-warden so chosen shall be sworn to the faithful discharge of his duty by the clerk of any city or town in which he may be chosen, within ten days after his election; and said clerk shall make record thereof; and such fish-wardens when duly sworn are authorized to measure seines and locations, and to pursue the duties of their office in any place, and to enter any building where they have good cause to believe any fish taken in violation of the

provisions of this act are kept. And if any person chosen fish-warden as aforesaid, shall neglect, for the space of ten days after his election, being notified thereof, to take the oath aforesaid, he shall forfeit and pay to the use of the town or city in which he was so elected or chosen, a fine of ten dollars, to be recovered in an action of tort, in the name of the treasurer of such town or city, and the town or city shall proceed to fill the vacancy created by such refusal to be qualified as aforesaid; and if any of said towns or city shall neglect to choose fish-wardens as aforesaid, or to make sale of their privileges as aforesaid, such town or city shall forfeit and pay a fine of one hundred dollars, to be recovered in an action of tort, to the use of any person who shall sue for the same.

SECT. 10. The proprietors of the mills and dam at King's Bridge in Squawbetty Village, and all other proprietors of dams on said rivers, shall keep open a good and sufficient way for the passage of fish that usually go up said Taunton Great River in their usual and proper season during the time named in the first section of this act: *provided*, such fish-way need not be kept open in the spring of the year before such proprietors or some one of them, or their agent or agents, shall have been notified to open them by some fish-warden. And the proprietors of any dam on said rivers who shall not comply with the provisions of this section, shall forfeit and pay the sum of twenty dollars for each and every day during which they shall wilfully neglect to comply therewith, to be recovered in an action of tort, to the use of any fish-warden who shall sue for the same, in any court of competent jurisdiction.

SECT. 11. Any person who shall violate any of the provisions of this act, or shall take any shad or alewives in the waters aforesaid, at any time or in any manner contrary to the provisions of this act, shall forfeit and pay a sum not less than five nor more than fifty dollars, to be recovered in an action of tort, in any court having jurisdiction of either of the parties to such action, to the use of the person who shall sue for the same; or shall, upon complaint made before any justice of the peace having jurisdiction of the offence and conviction thereon, be punished by a fine not exceeding twenty dollars and imprisonment not exceeding sixty days. And in any suit or complaint instituted under the provisions of this section, the right of appeal shall be had to the court of common pleas by either party in such action, or the defendant in such complaint.

SECT. 12. This act shall take effect from and after its passage; and all acts and parts of acts inconsistent with the provisions of this act, are hereby repealed.—[May 19, 1855.]

RESOLVE concerning the Fisheries in Taunton Great River.

[Resolves, 1832, ch. 120.]

(Ch. 22.) *Resolved*, That the governor be requested to appoint three commissioners to examine into the condition of the fisheries in Taunton Great River, and the laws regulating the same, and to report such alterations or amendments of said laws as may tend to promote the interest and harmony of the inhabitants of the several towns on said river.—[March 17, 1854.]

1856.

AN ACT to protect the Fisheries in Ipswich River.

[Special Laws, v. 1, pp. 191, 451; v. 2, p. 128; v. 3, p. 524. 1805, 29; 1810, 117; 1812, 127; 1814, 22; 1824, 101; 1825, 78; 1829, 40; 1839, 134; 1845, 79; 1855, 174; 1856, 14, 52, 248.]

(Ch. 14.) SECT. 1. *Be it enacted*, The inhabitants of the town of Ipswich, in Essex County, may at any time between the first day of April and the first day of June (Sundays excepted), take alewives from Ipswich River, in said town, with dip-nets, and at no other time.

SECT. 2. No person shall, between the first day of April and the first day of June, set, draw or stretch any seine or drag-net in any of the waters in Ipswich River, within the limits of said town.

SECT. 3. Any person who shall offend against the provisions of either of the foregoing sections of this act, shall for each and every offence forfeit the sum of one hundred and fifty dollars, one half thereof to the use of the complainant, and the other half to the use of the town.

SECT. 4. All acts and parts of acts inconsistent with this act are hereby repealed.

SECT. 5. This act shall take effect from and after its passage.—[February 13, 1856.]

AN ACT in addition to "An Act to incorporate the Pocha Pond Meadow and Fishing Company in Edgartown."

[1848, ch. 185; 1851, ch. 126.]

(Ch. 45.) SECT. 1. *Be it enacted*, The Pocha Pond Meadow and Fishing Company, in Edgartown, in Dukes County, their successors and assigns, are hereby exclusively empowered, by seines, nets, or any other fishing apparatus, at any time between the first day of March and the first day of July in each year, to take herrings from the waters of Pocha or Capepoge Ponds, in said Edgartown, or any of the outlets thereof.

SECT. 2. If any person shall set, stretch or drag a seine or net in said ponds, or the outlets thereof, or shall in any manner catch, or attempt to catch herrings therein, except as above provided, without the consent of the said company, he shall forfeit and pay to the use of the aforesaid company the sum of twenty dollars for each offence, and an additional sum of twenty dollars for each and every barrel of herrings so taken.

SECT. 3. If any person shall in any way hinder or prevent the herrings from passing through any or either of the aforesaid ponds, or the outlets thereof, during the period aforesaid, he shall for each and every offence forfeit and pay to the use of said company the sum of one hundred dollars.

SECT. 4. The penalties above provided for may be sued for and recovered in an action of debt, or an act of trespass in the case, in any court proper to try the same.

SECT. 5. The proprietors of the aforesaid corporation may increase the number of shares to sixteen.

SECT. 6. All acts and parts of acts inconsistent with the provisions of this act, are hereby repealed.

SECT. 7. This act shall take effect from and after its passage.—[March 11, 1856.]

AN ACT to protect the Fisheries in Ipswich River, in the Towns of Hamilton, Wenham, Topsfield, Boxford and Middleton.

[1856, chs. 14, 248.]

(Ch. 52.) SECT. 1. *Be it enacted*, No person shall set, stretch or draw any seine or drag-net in any of the waters in Ipswich River, within the limits of the towns of Hamilton, Wenham, Topsfield, Boxford and Middleton.

SECT. 2. Any person who shall offend against the provision of section first of this act, shall for each and every offence forfeit the sum of one hundred dollars, one half thereof to the use of the complainant, and the other half to the town where the offence was committed.

SECT. 3. This act shall take effect from and after its passage.—[March 15, 1856.]

AN ACT to regulate the Construction of Fish-weirs.

(Ch. 50.) SECT. 1. *Be it enacted*, The mayor or aldermen of any city, and the selectmen of the several towns lying upon the tide-waters of this Commonwealth, are hereby empowered to authorize, in writing, any person to construct fish-weirs in said waters, within the limits of such city or town, for a term not exceeding five years: *provided*, said weirs shall cause no obstruction to navigation nor encroach on the rights of others.

SECT. 2. If any person shall wilfully injure or destroy said weirs, or any part thereof, or shall, without leave of the owners thereof, take from the same any fish found therein, he shall, upon conviction, forfeit and pay to the use of the owners of said weirs, a sum not exceeding twenty dollars, to be recovered in any court of competent jurisdiction, and shall, moreover, be liable to the parties injured for all damages, in a civil suit.

SECT. 3. This act shall take effect from and after its passage.—[March 15, 1856.]

AN ACT relating to Fish-ways at the several Dams on Barker's River, so called, in the Town of Pembroke.

[1848, 116; 1853, 350. Additional Act, 1865, ch. 47.]

(Ch. 83.) SECT. 1. *Be it enacted*, The owners or occupants of the several mill-dams erected across Barker's River may construct, in the manner prescribed by the fish-committee of the town of Pembroke for the time being, good and sufficient passage-ways for the fish called alewives to pass said dams up said river to the Indian Ponds, so called, in the towns of Pembroke and Hanson; and the owners or occupants of said dams shall cause the same to be built and kept in repair at their own expense, and the same shall be kept open from the tenth day of April to the fifteenth day of May, inclusive, in each year.

SECT. 2. In case the owners or occupants of said dams shall neglect or refuse to comply with the foregoing requisition, then said owners or occupants shall take up the waste-ways of said mills, agreeable to an act entitled "An Act to equalize and protect the fishery on the North River, so called, in the county of Plymouth," passed the nineteenth of May, one thousand eight hundred and fifty-three.

SECT. 3. The fish-committee of the town of Pembroke, for the time being, shall have full power to regulate and control the flow of water in Barker's River and Indian Ponds, so long as they may deem it necessary for the preservation of said alewife fish in their passage to and from said Indian Ponds.

SECT. 4. All acts and parts of acts inconsistent with this act, are hereby repealed.

SECT. 5. This act shall take effect from and after its passage.—[April 3, 1856.

AN ACT for the preservation of Fish in Buzzard's Bay, within the Towns of Sandwich and Wareham.

[Additional Act, 1865, ch. 212.]

(Ch. 176.) SECT. 1. *Be it enacted*, No person shall set, draw or stretch any seine or net, for the purpose of taking any fish, except blue-fish, in the bays, harbors, ponds, rivers or creeks, of the waters of Buzzard's Bay, within one mile from the shore, and within the jurisdiction of the towns of Sandwich and Wareham.

SECT. 2. From the first day of April to the first day of July inclusive, it shall be unlawful for any person to take more than one hundred pounds per week of lobster, tautog, bass or scuppaug, within the waters aforesaid.

SECT. 3. Any person violating the provisions of this act, or either of them, shall be subject to a penalty of not more than fifty dollars, one-half to the complainant and the remainder to the towns in whose jurisdiction the offence was committed.

SECT. 4. The penalties above provided for may be sued for and recovered in an action of contract, or an action of tort, in any court proper to try the same, upon complaint of the selectmen or any legal voter of the towns of Sandwich or Wareham.

SECT. 5. This act shall take effect from and after its passage.—[May 24, 1856.

AN ACT to incorporate the Farm Pond Fishing Company, in Edgartown.

(Ch. 211.) SECT. 1. *Be it enacted*, Elijah Norton, Benjamin Davis and Orlando E. Davis, their associates, successors and assigns, are hereby made a corporation by the name of the "Farm Pond Fishing Company, in Edgartown," in Dukes County, and are empowered to close the present outlet of said pond and to make another outlet at such place as they may select, through the lands of said proprietors to the Vineyard Sound, for the purpose of creating a herring fishery.

SECT. 2. The aforesaid corporation are hereby empowered, by seines, nets or otherwise, to take herring from the waters of the said pond, or the outlet thereof, at such times as a majority of the proprietors at a legal meeting may direct.

SECT. 3. If any person shall set, stretch or drag a seine or net in said pond or outlet thereof, except as above provided, without the consent of said company, he shall forfeit and pay to the use of said company the sum of ten dollars for each offence, and an additional sum of ten dollars for each and every barrel of herring so taken, to be recovered in any court proper.

to try the same: *provided, however*, that nothing in this act shall prevent any person from taking any other fish from said pond.

SECT. 4. The present owners of lands adjoining the said pond, or creek, or outlet, shall have each one share only in said fishery; and no one of them shall, by conveyance or descent of his lands, create or cause to be created an additional number of shares: *provided, however*, that each of the present owners, or his successors or assigns, may divide his original share into parts or fractions.

SECT. 5. The foregoing provisions of this act shall not affect the existing rights of any person or corporation.—[May 30, 1856.]

AN ACT for the protection of the Fisheries on the South Shore and Bays on the South side of the Town of Barnstable and District of Marshpee.

[1853, ch. 186. Additional Acts, 1859, ch. 105; 1860, ch. 46.]

(Ch. 214.) SECT. 1. *Be it enacted*, It shall be unlawful to set or draw any seine or drag-net to take fish in any of the bays, or in waters within one mile from the beach and shore on the south side of the town of Barnstable and district of Marshpee, within the limits between Succanesset Point and Point Gammon, between the first day of April and the first day of November, in each year.

SECT. 2. The provisions of the sixteenth section of the fifty-fifth chapter of the Revised Statutes, concerning the taking of shell-fish in the town of Chatham, shall be, and the same hereby are extended to the south shore of the town of Barnstable and district of Marshpee.

SECT. 3. Every person violating any provision of this act shall forfeit and pay for each offence not less than twenty nor more than one hundred dollars, to be recovered, together with costs of suit, by an action of tort, brought by any inhabitant of said town or district, in any court competent to try the same.

SECT. 4. Any boat, craft or seine being in the possession or use of any person violating the provisions of this act at the time and place of such violation, may be seized by any inhabitant of said town or district, and detained not exceeding forty-eight hours, in order that the same, if need be, may in that time be attached or arrested by due process of law, for the better security of the payment of the said fines and forfeitures with cost: *provided, however*, that if the person owning, or so in the possession or use of such boat or craft, shall, before being sued therefor, pay said highest named penalty to either the treasurer of the town of Barnstable or of the district of Marshpee, such boat or craft shall be discharged with the contents therein; and *provided, also*, that if the person owning or so in the possession or use of such seine, shall, as aforesaid, pay as aforesaid the same lowest named penalty, such seine shall be discharged in like manner.

SECT. 5. All forfeitures and penalties recovered and received by virtue of this act, shall go one half to the complainant and the other half for the use of the said town, if the complainant shall be an inhabitant thereof, or for the use of said district if the complainant shall be an inhabitant of said district.

SECT. 6. Nothing in this act contained shall be construed to prevent the taking of menhaden or mackerel, by the use of seines, within the said

waters, between Succanesset and Point Gammon, when used *bona fide* for that purpose and not for the purpose of taking other fish.

SECT. 7. This act shall take effect from and after its passage.—[May 30, 1856.

AN ACT to protect the Fishery in Pleasant Bay.

(Ch. 225.) SECT. 1. *Be it enacted*, The town of Orleans, at any legal town meeting called for the purpose, may make and enact such laws as they may from time to time deem expedient, to protect and preserve the fishery in Pleasant Bay and all the inlets therefrom within the limits of said town of Orleans: *provided, always*, that no law, made as above, shall infringe upon the laws of the Commonwealth.—[May 31, 1856.

AN ACT in addition to the several Acts for the protection of the Fisheries in Ipswich River.

[Special Laws, v. 1, pp. 191, 451; v. 2, p. 123; v. 3, p. 524. 1805, ch. 29; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22; 1824, ch. 101; 1825, ch. 73; 1829, ch. 40; 1839, ch. 134; 1845, ch. 79; 1855, ch. 171; 1856, chs. 14, 52. Additional Act, 1868, ch. 157.]

(Ch. 248.) SECT. 1. *Be it enacted*, When any person is found violating the provisions of any law for the protection of the fisheries in Ipswich River, it shall be lawful for any constable of the towns mentioned in said acts to seize and detain any boat, vessel or nets used by such persons as are found violating said laws for the protection of fisheries in Ipswich River, and hold such boat, vessel or nets, until the lowest fine named in those acts shall be paid or good and sufficient bond, with surety, shall be given to abide the judgment of the court in that case.

SECT. 2. This act shall take effect from and after its passage.—[June 3, 1856.

AN ACT to protect the Fishery in the Town of Edgartown.

[1826, ch. 54; 1851, ch. 77.]

(Ch. 285.) SECT. 1. *Be it enacted*, No person shall set, draw or stretch any seine or net of any kind within one mile from the shore of any of the ponds, creeks, bays, harbors or inlets of the sea within the limits of the town of Edgartown, excepting in a pond known by the name of the Oyster Pond, from the first day of April to the first day of October, exclusive, in each year; nor shall any person not an inhabitant of said town at any time set, drag or stretch any seine or net in any of the ponds, creeks or outlets thereof. The seining of menhaden and mackerel is exempted from this act.

SECT. 2. Any person violating any provision of this act shall be liable to a fine not exceeding three hundred dollars for each offence, or any boat, vessel or fishing apparatus used by persons violating the provisions of this act may be seized and detained not exceeding the time of forty-eight hours, by any person appointed for the purpose by the town of Edgartown, for the purpose of duly prosecuting the person offending this law.

SECT. 3. The town of Edgartown is hereby authorized to choose, at the annual town meeting or at any meeting duly warned for that purpose, such number of fish-wardens as may at the time be thought necessary, who shall be sworn to the faithful discharge of their duty, whose duty it shall be to prosecute for offences against the provisions of this act; one-half of

all fines imposed and collected shall inure to the fish-wardens, and the other half to the Commonwealth.

SECT. 4. All fines or penalties for violating any provision of this act, with costs, may be sued for and recovered in any court competent to try the same, on complaint of either of the fish-wardens.

SECT. 5. This act shall take effect from and after its passage.—[June 6, 1856.]

AN ACT for the preservation of Fish in the Merrimac River.

[1819, ch. 20; 1820, chs. 22, 70; 1822, ch. 75; 1832, ch. 56.]

(Ch. 289.) SECT. 1. *Be it enacted*, The Essex Company shall, before the first day of February which will be in the year one thousand eight hundred and fifty-seven, make and forever thereafter maintain in or around their dam in Lawrence, a suitable and sufficient fish-way for the usual and unobstructed passage of fish during the months of April, May, June, September and October, in every year, under a penalty of not less than one hundred dollars nor more than five hundred dollars for every day said company shall neglect to make and maintain such fish-way after said first day of February, to be recovered by indictment in either county of Essex or Middlesex, one-half to the use of the complainant and one-half to the use of the Commonwealth.

SECT. 2. No person shall take any fish with a spear, net, hook or seine during either of the months aforesaid in any year, within eighty rods of said dam or the entrance of said fish-way.

SECT. 3. Every person offending against the provisions of the preceding section shall be punished by fine, not exceeding one hundred dollars for each offence, one-half of which shall inure to the use of the complainant, and the other half to the use of the Commonwealth.

SECT. 4. All acts and parts of acts inconsistent herewith are hereby repealed.—[June 6, 1856.]

RESOLVE concerning the Artificial Propagation of Fish.

(Ch. 58.) *Resolved*, That his excellency the governor, with the advice of the council, be authorized to appoint three commissioners whose duty it shall be to ascertain and report to the next general court, such facts respecting the artificial propagation of fish as may tend to show the practicability and expediency of introducing the same into this Commonwealth under the protection of law; and said commissioners shall keep an account of their actual expenses in executing this commission, to be duly audited and allowed by the governor and council, and paid by warrant upon the treasury duly drawn by the governor for that purpose: *provided, however*, that the amount does not exceed one thousand dollars.—[May 16, 1856.]

1857.

AN ACT to amend Chapter Fifty-five of the Revised Statutes, relating to Fisheries.

[Repeals second section of Revised Statutes.]

(Ch. 30.) SECT. 1. *Be it enacted*, No person shall take or catch any pickerel or trout in any rivers, streams or ponds, in any other manner than by hooks and lines; and no person shall take any pickerel in any rivers,

streams or ponds, from the first day of December to the first day of May; and every person offending against any of the provisions of this act shall forfeit the sum of one dollar for every pickerel or trout by him taken contrary to the said provisions, to be recovered by indictment, or on complaint before any justice of the peace; and one-half of said fine shall belong to the complainant, and the other half to the Commonwealth: *provided*, that the inhabitants of any town may, at their annual meeting, suspend, in whole or in part, the provisions of this act, so far as respects such town, for any time not exceeding one year.

SECT. 2. The second section of chapter fifty-five of the Revised Statutes, relating to fisheries, is hereby repealed.—[March 25, 1857.

AN ACT to protect the Menhaden Fishery in the Towns of Duxbury, Plymouth and Kingston.

(Ch. 85.) SECT. 1. *Be it enacted*, Every person who shall, between the first day of May and the first day of November, inclusive, in each year, deposit the offal or waste dressing of the menhaden fish upon the shores or flats, or throw the same into the waters of the bays, harbors, rivers or creeks of the towns of Duxbury, Plymouth or Kingston, shall, for each and every offence, forfeit and pay a sum not exceeding fifty dollars, one-half to the complainant, and the remainder to the town within whose jurisdiction the offence was committed, to be sued for and recovered in any court competent to try the same, on complaint of any one of the selectmen, or any legal voter of either of the towns of Duxbury, Kingston or Plymouth.

SECT. 2. Any boat, craft, vessel or fishing apparatus used by persons violating the provisions of this act, may be seized and detained not exceeding forty-eight hours by the selectmen of either of the towns aforesaid, in order that the same, if need be, may be attached or arrested by due process of law, to satisfy said fine, with costs.

SECT. 3. This act shall take effect from and after its passage.—[April 24, 1857.

AN ACT to incorporate the Lagoon Pond Company in Dukes County.

(Ch. 87.) SECT. 1. *Be it enacted*, Bayes Norton, Darius Norton, Elisha T. Smith, and their associates and successors, are hereby made a corporation by the name of the Lagoon Pond Company, in Dukes County, and are empowered to build a dam across said pond about or from that part of the pond called Long Point, for the purpose of creating a herring and perch fishery; and said company shall possess the exclusive right to said herring and perch fishery: *provided*, that all persons may take fish from said pond with hook and line and may spear eels or dig clams therefrom.

SECT. 2. The said company shall make said dam within two years from the passage of this act; and said dam shall be of sufficient width and strength, with a good and sufficient bridge, so that it can be used as a public highway.

SECT. 3. The said dam shall not injure by its height any of the surrounding meadows, or take away or injure any existing right of any person or corporation whatever.

SECT. 4. For the above named purposes said company shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities contained in the forty-fourth chapter of the Revised Statutes.

SECT. 5. If any person, without leave from said company, shall take any fish from said pond except as provided in this act, they shall forfeit for each offence a sum not exceeding twenty dollars, which may be recovered in any court competent to try the same.—[April 24, 1857.

AN ACT to incorporate the Caleb's Pond Company.

(Ch. 193.) SECT. 1. *Be it enacted*, Valentine Pease, Henry Pease, 2d, and David Davis, their associates and successors, are hereby made a corporation by the name of the Caleb's Pond Company, in Edgartown, Dukes county, for the purpose of creating a herring and perch fishery; and they are empowered to close the present outlet of said pond and make a new one through the land of the company. The profits of the fishery so created shall belong to the company; but all persons may take fish with hook and line or spear eels from said pond. And for this purpose the company shall have all the powers and privileges and be subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes.

SECT. 2. If any person, without permission of the company, shall take any fish from said pond, except as provided in this act, he shall be subject to a fine not exceeding fifty dollars, to be sued for in any court competent to try the same, and said fine shall belong to the company.

SECT. 3. All persons who now are owners of land adjoining said pond or outlet, may become members of said corporation, provided they shall signify to the company their intention to become members within sixty days from the organization of the company; and the company shall give public notice of their organization by publishing the same at least sixty days in the "Vineyard Gazette."

SECT. 4. The present owners of the land adjoining the said pond or outlet who shall determine to become members of the corporation shall each be entitled to one share and no more.

SECT. 5. In making or closing any outlet of said pond, the company shall not infringe upon the rights of any person or corporation.—[May 19, 1857.

1858.

AN ACT regulating the Seining of Menhaden in the Rivers of the Commonwealth.

(Ch. 52.) SECT. 1. *Be it enacted*, The mayor and aldermen of any city or the selectmen of any town situated upon or adjacent to any river in which the seining of fish is now or may hereafter by law be prohibited, may, upon the petition of twelve or more legal voters, and after due notice and hearing thereon, grant permission to such persons, upon such condition and with such restrictions as they may see fit, to seine menhaden therein, if, in their judgment the same is consistent with the public good: *provided, however*, that in all cases where two or more cities or towns are situated upon said waters and interested in said fishery, no action shall be had except upon petition to each of them, and by their concurrent vote.

SECT. 2. If any person so licensed shall exceed in any manner the terms of said permission or violate any of the conditions thereof, he shall be subject to the same penalties as would attach to seining without such license.

SECT. 3. Such license may be altered or revoked at any time, by the concurrent action of the municipal authorities granting the same.—[March 15, 1858.

AN ACT to incorporate the Baker's Pond and Drain Fishing Company.

(Ch. 65.) SECT. 1. *Be it enacted*, Wilson V. Baker, Loren Baker, Orlando Baker and Laban Baker, their associates, successors and assigns, are hereby made a corporation by the name of the Baker's Pond and Drain Fishing Company, in the town of Yarmouth, and are empowered to make a suitable outlet from Baker's Pond in said town, through their own land, to Bass River, for the purpose of creating an alewife fishery, and are authorized to regulate the same; with all the powers and privileges, and subject to all the liabilities, duties and restrictions contained in the forty-fourth chapter of the Revised Statutes.

SECT. 2. If any person, without the permission of the said corporation, shall take, catch or haul on shore any alewives from said Baker's Pond or Drain, or within one hundred yards from the mouth of said drain, he shall, upon complaint, forfeit a sum not exceeding two dollars, if the quantity taken be less than one barrel; and if the quantity be more than one barrel, a sum not exceeding five dollars for each barrel of fish so taken, to be recovered in any court proper to try the same.

SECT. 3. This act shall not take effect unless accepted by the town of Yarmouth, at a legal meeting called and held for that purpose within one year after the passage of this act.—[March 22, 1858.

AN ACT in relation to the Pickerel and Perch Fishery in the District of Marshpee.

(Ch. 94.) SECT. 1. *Be it enacted*, The district of Marshpee is hereby authorized and empowered, at any legal meeting held for that purpose, to make and establish by-laws in relation to the taking of pickerel and perch in any of the ponds in said district, by hooks and lines, at any season of the year.

SECT. 2. The said district, at any regular meeting, with notice in the warrant that the subject will be acted on, may authorize the selectmen of said district to let or dispose of the pickerel and perch fishery, or either, within said district or any part thereof, from time to time, for any term not exceeding one year, to any person, upon such terms as may be by its by-laws fixed and established.

SECT. 3. Any person who shall take or catch any fish in violation of the provisions of any by-laws established under authority of this act, shall forfeit and pay a fine of not less than one dollar nor more than twenty dollars, for each and every offence, to be recovered by prosecution before any court of competent jurisdiction, one-half to the person prosecuting and one-half to the said district.

SECT. 4. All acts and parts of acts inconsistent herewith are hereby repealed.—[March 26, 1858.

AN ACT in further addition to an Act to regulate the Fisheries in the Vicinity of Nantucket.

[This Act repealed, 1870, ch. 284. 1833, ch. 211; 1850, ch. 6; 1855, ch. 156; 1858, ch. 95.]

(Ch. 95.) SECT. 1. *Be it enacted*, The provisions of the sixth chapter of the acts of eighteen hundred and fifty, and of the one hundred and fifty-

sixth chapter of the acts of eighteen hundred and fifty-five, are hereby extended and shall apply to the taking of fish with any kind of net by any person or persons within the limits prescribed in the act first above mentioned.—[March 26, 1858.

AN ACT to protect the Herring Fisheries in the Town of Falmouth.

[Special Laws, v. 2, pp. 222, 289. 1825, 63; 1851, 98.]

(Ch. 130.) SECT. 1. *Be it enacted*, No person shall set down or stretch any seine or drag-net of any kind within a half mile from the mouth or outlet of any river or stream running from any pond in Falmouth into the sea, or Vineyard Sound, between Nobsque Point and Waquoit Harbor, from the twentieth day of March to the twentieth day of September inclusive, in each year.

SECT. 2. Any person violating any of the provisions of this act shall be liable to a fine not exceeding one hundred dollars for each offence.

SECT. 3. All fines and penalties for violating any provision of this act, with costs, may be sued for and recovered in any court competent to try the same, on the complaint of any inhabitant of said town of Falmouth, one half thereof to accrue to the complainant and the other half to the Commonwealth.

SECT. 4. All acts and parts of acts inconsistent with this act, are hereby repealed.—[March 27, 1858.

1859.

AN ACT in addition to an Act to regulate the Fishery in Newbury.

[1837, 195.]

(Ch. 54.) *Be it enacted*, The third section of the one hundred and ninety-fifth chapter of the acts of the year eighteen hundred and thirty-seven, is hereby amended by striking out the words "five dollars" and inserting in place thereof the words "one dollar for each fish so taken."—[February 19, 1859.

AN ACT regulating the Herring Fishery in Indian Head River.

[Special Laws, v. 1, p. 326.]

(Ch. 90.) *Be it enacted*, All the rights, duties, benefits and privileges conferred or imposed upon the towns of Pembroke and Hanover, or either of them, by the act entitled "An Act for regulating the taking the fish called alewives in their passage up Indian Head River, so called, between the towns of Pembroke and Hanover, in the county of Plymouth, into a pond in said town of Pembroke known by the name of Indian Head Pond," passed February twenty-second, in the year one thousand seven hundred and ninety-two, are hereby conferred and imposed upon the towns of Hanson and Hanover, in said county of Plymouth.—[March 7, 1859.

AN ACT relating to the Trout Fishery in Marshpee River.

[1849, ch. 36; 1853, ch. 186. Repealed, 1860, ch. 46.]

(Ch. 105.) SECT. 1. *Be it enacted*, The first section of the thirty-sixth chapter of the acts of the year one thousand eight hundred and forty-nine is hereby so amended that no person shall take any trout in Marshpee River

from the fifteenth day of September in each year to the twentieth day of March in the year next ensuing.

SECT. 2. The fifth section of chapter one hundred and eighty-six of the acts of the year one thousand eight hundred and fifty-three is hereby so amended that the selectmen of the district of Marshpee may lease or dispose of the trout or herring fishery in said district, according to the provisions of said section, for terms of time not exceeding twenty years in any one lease.—[March 17, 1859.]

AN ACT to amend an Act relating to the Fisheries.

[Act 1857 amended.]

(Ch. 106.) SECT. 1. *Be it enacted*, The first section of the thirtieth chapter of the acts of the year eighteen hundred and fifty-seven, is hereby amended by striking out all after the word “provided,” in said section, and inserting the following: That the provisions of this act shall not extend to any town unless such town, at a legal meeting, shall adopt the same.—[March 17, 1859.]

1860.

AN ACT to protect the Fishery in Marshpee.

[1856, ch. 214. Additional Act, 1864, ch. 150.]

(Ch. 46.) SECT. 1. *Be it enacted*, No person shall take any trout in Marshpee River, extending to and including all the waters into which said river empties from the westerly side as far as the water flows, to a line drawn due east and west across the northerly end of Poppenessett Island, so called; thence on the same line east to the centre of the channel which forms the line of division between Barnstable and Marshpee; thence by said line of division northerly till it meets a line drawn due east from the mouth of Quawker's River, so called; thence west to the mouth of said Quawker's River, and thence by the shore to the said Marshpee River, from the fifteenth day of September in each year to the twentieth day of March in the year next ensuing.

SECT. 2. No person except the proprietors of said district, shall take any trout in said river and the waters aforesaid, described in the first section, at any time, without a written permit from the treasurer of Marshpee, which shall specify the time when and the places where the person holding the same is allowed to fish. And no person shall at any time use any other means of taking trout in said river and waters described as aforesaid, than by angling with hooks and lines.

SECT. 3. The said district may, by vote in legal meeting, make any regulations or by-laws respecting said fishery not repugnant to the provisions of this act; and the income from said fishery shall inure wholly to said district.

SECT. 4. Any person offending against the provisions of this act, or any regulations or by-laws passed by authority of the third section of this act, shall forfeit and pay a fine of twenty dollars for each and every offence, to be recovered by prosecution before any trial justice in the county of Barnstable, to the benefit of said district.

SECT. 5. Any person who shall have in his possession any trout, knowing the same to have been taken from said river contrary to the provisions

of this act, shall forfeit the sum of fifty cents for every trout so found in his possession.

SECT. 6. If any minor shall offend against the provisions of this act, the parent, master or guardian of such minor shall be liable, and may be prosecuted accordingly therefor.

SECT. 7. The said district, at any regular meeting, with notice in the warrant that the subject will be acted on, may authorize the selectmen of said district to lease or dispose of the trout or herring fishery belonging to said district, from time to time, for terms of time not exceeding twenty years in any one lease, the proceeds to go into the treasury for the benefit of the district; and they may elect and appoint two or more fish-wardens to protect said fishery. All prosecutions under this act shall be commenced within one year from the time when the offence is committed.

SECT. 8. The thirty-sixth chapter of the year eighteen hundred and forty-nine, and the fifth section of chapter one hundred and eighty-six of the year eighteen hundred and fifty-three, and chapter one hundred and five of the year eighteen hundred and fifty-nine are hereby repealed.

SECT. 9. This act shall take effect from and after the first day of March next.—[February 24, 1860.

AN ACT to incorporate the Assonet Fishing Company.

(Ch. 82.) SECT. 1. *Be it enacted*, Gilbert Winslow, John D. Wilson and John Crane of Freetown, their associates and successors, are hereby made a corporation by the name of the Assonet Fishing Company, for the purpose of introducing, cultivating and catching herrings or alewives in the Assonet River and Bay, so called, and the several ponds connected therewith; and they are hereby empowered to alter such dams and construct such race-ways and adopt and carry out such other measures as may be necessary to secure the aforesaid purpose, subject to all the duties, restrictions and liabilities set forth in the forty-fourth chapter of the Revised Statutes, and the sixty-eighth chapter of the General Statutes.

SECT. 2. If any person, without the permission of said corporation, shall take, catch or haul on shore any herrings in said river, bay or ponds, he shall forfeit and pay for the use of said corporation, a sum not exceeding three dollars, if the quantity so taken be less than one barrel; but if the quantity be more than one barrel, the person so offending shall forfeit and pay for each barrel of fish so taken, the sum of five dollars, to be recovered in any court proper to try the same.

SECT. 3. If any damage shall be done by said corporation to the property of any individual not a member of the corporation, such individual shall be entitled to recover reasonable damage, to be estimated in the same manner as damages occasioned by the laying out of highways.

SECT. 4. Nothing herein contained shall authorize said company to take or use the private property of any person without his consent, or deprive any inhabitant of the town of Freetown of any privilege which he now has of taking any kind of fish, excepting herring, from said river, bay or ponds.

SECT. 5. This act shall take effect from and after its passage.—[March 17, 1860.

AN ACT to regulate the Fishery in the Agawam and Half-way Pond Rivers.

[1838, ch. 19; 1844, ch. 65; 1853, ch. 377. Additional Act, 1863, ch. 117.]

(Ch. 89.) SECT. 1. *Be it enacted*, The town of Plymouth at its annual meeting in the month of March or April, and the town of Wareham at its annual meeting in the month of November, of each year, shall choose, by ballot, a committee of not more than three persons each, who shall be sworn to to the faithful discharge of their duties, in the manner of other town officers; which committee shall, in the month of March, annually, after a public notice of at least ten days, sell at public auction the privilege of taking the fish called alewives and shad in the Agawam and Half-way Pond Rivers, in the county of Plymouth, at such places, not exceeding two in said towns, and on such days, not exceeding three in each week, as said committee shall agree upon and publish in their notice of sale; they shall also express in said notice the manner of taking and disposing of said fish, and the price at which the purchasers may sell them, which price shall not exceed twenty-five cents per hundred for alewives and four cents each for shad: *provided, nevertheless*, that said committee may fix upon one place in the town of Wareham and one day in each week for taking shad, different from the place and day of the week appointed for taking alewives.

SECT. 2. The committee of the town of Plymouth, the first year after the passage of this act, and the committee of the town of Wareham the second year, and so on alternately, forever, shall notify the town clerk of the other town concerned in said fishery, of the time and place in which said committee shall meet, ten days at least before the time of meeting; and the members of the committee present at the said meeting shall constitute a quorum for doing business.

SECT. 3. If either of said towns neglects to choose its committee as aforesaid, or if the committee of either town neglects to give notice, as above required, to the other, said town so neglecting shall forfeit and pay to the use of the other which chooses such committee or whose committee gives such notice, for each neglect, the sum of one hundred dollars.

SECT. 4. All persons except the purchasers aforesaid or those employed by them, who take any of said fish in said rivers or in any pond or stream having communication therewith, between the first day of April and the fifteenth day of June, both inclusive, in each year, shall forfeit and pay not less than five dollars nor more than fifty dollars for each and every offence.

SECT. 5. The owner or occupier of any dam on said rivers, shall annually, between the fifteenth day of April and the fifteenth day of June next following, for such term of time and in such manner as said committee directs, open a sufficient passage for said fish through said dam; and on failure of opening such passage or of continuing the same open as aforesaid, shall forfeit and pay the sum of one hundred dollars; and said committee may open such dam, when neglected as aforesaid, at the expense of the proprietor thereof: *provided*, no more damage is thereby done the owner than is necessary to effect said purpose.

SECT. 6. If any person makes any weir or causes any obstruction to the free passage of said fish up said rivers or makes use of any seine to take said fish in said rivers or in any pond or stream communicating with the same in any other manner or at any other or place than such as may be

approved and established by said committee, between the fifteenth day of April and the fifteenth day of June as aforesaid, he shall forfeit and pay not less than five dollars nor more than fifty dollars for each and every offence; and said committee shall remove such weir or obstruction at the expense of the person causing the same, and also seize to the use and disposal of said towns any seine used as aforesaid, and make complaint to the town treasurer of either of the towns aforesaid, of any violation of this act that shall come to their knowledge.

SECT. 7. The treasurers of the aforesaid towns respectively shall, upon the complaint of any member of the committees aforesaid, sue for the recovery of any forfeitures incurred by a breach of any of the regulations provided in this act, and of any such further regulations as may be provided and established by said committees in conformity to this act; and all fines and forfeitures recovered for any breaches aforesaid, except such as are provided in the third section of this act, shall, together with the proceeds of said fishery, be equally divided between said towns; and all the expenses attending said suits shall in like manner be equally borne by them. And the treasurers aforesaid respectively shall, in behalf of their respective towns, recover by an action on the case of any person or corporation withholding the same, one-half part thereof, in any court proper to try said action.

SECT. 8. The purchasers of the privileges of taking said fish shall in all respects conform themselves to such regulations and conditions as said committees shall publish as aforesaid; and on failure thereof shall forfeit and pay for each offence a sum not less than five dollars nor more than fifty dollars, to be recovered in any court of proper jurisdiction.

SECT. 9. Any member of the committees aforesaid may be admitted as a competent witness in any prosecution for a breach of any regulation as aforesaid.

SECT. 10. The committee chosen in said town of Plymouth either in the months of March or April last, and the committee chosen by said town of Wareham in the month of November last, for the regulating the taking of alewives in said rivers, agreeably to the provisions of the act then existing for that purpose, shall perform all the duties for the present year that are required of committees hereafter to be chosen under the provisions of this act; and they, as also committees hereafter chosen for the purposes contemplated by this act, shall receive out of the proceeds of said fishery, one dollar and twenty-five cents each for every day's service they may be actually engaged in performing the duties herein required of them.

SECT. 11. All acts and parts of acts inconsistent with the provisions of this act, are hereby repealed.—[March 20, 1860.]

AN ACT to incorporate the Nine Mile Pond Fishing Company.

(Ch. 91.) SECT. 1. *Be it enacted*, Nelson Scudder, Daniel Scudder, Walter Chipman, Elijah Sears, their associates and successors, are hereby made a corporation by the name of the Nine Mile Pond Fishing Company, for the purpose of opening a canal or outlet from Nine Mile Pond in Barnstable, and from Long Pond to tide-water, and maintaining the same; and for that purpose are empowered to open such canal or outlet and to continue the same in such manner as to said corporation shall seem fit and

proper; and they shall have all the powers and privileges and be subject to all the duties, liabilities and restrictions set forth in the forty-fourth chapter of the Revised Statutes and the sixty-eighth chapter of the General Statutes.

SECT. 2. Any herring fishery which may be created in the canal or outlet or the ponds aforesaid, by opening the same, or which may hereafter exist therein, shall be the property of said corporation; and if any person, without the permission of said corporation, shall take, catch, kill or haul on shore any herrings in said canal or outlet or in the ponds aforesaid, he shall forfeit and pay, for the use of said corporation, a sum not less than three dollars, if the quantity so taken, killed, caught or hauled on shore be less than one barrel; but if the quantity so taken, killed, caught or hauled on shore shall be more than one barrel, he shall forfeit and pay for each barrel of herring so taken, and for each fraction of a barrel, the sum of five dollars, to be recovered by an action of tort in the name of said corporation in any court of competent jurisdiction.

SECT. 3. Nothing herein contained shall authorize the said company to take or use the private property of any person without his consent; and any proprietor of lands adjoining said canal or outlet may become a member of said corporation if application be made therefor within six months from the time of the organization of said company under this act, by paying a due proportion of all expenses incurred by said corporation before the time of their admission.

SECT. 4. If any person not a member of said corporation shall receive damage in his lands or estate in consequence of the opening of said canal or outlet, or in consequence of the draining of said ponds or otherwise, and the parties in interest failing to adjust said damages, the party aggrieved may apply to the county commissioners of the county of Barnstable, who are hereby authorized to determine and assess the same; and either party may appeal from the decision of said commissioners to the superior court of the county of Barnstable, and have a trial by jury in said court.

SECT. 5. The said corporation, for the purpose herein set forth, and for maintaining and carrying on the fishery aforesaid, may hold real estate not exceeding two thousand dollars in value over and above the right of fishery named in the second section of this act.

SECT. 6. The capital stock of said corporation shall be one thousand dollars, represented by one hundred shares of ten dollars each, with the right to increase the same to three thousand dollars, by vote of said corporation.

SECT. 7. Nothing herein contained shall give the corporation rights and privileges in any fishery now existing in said ponds, over and above other citizens of the town of Barnstable; and this act shall be void unless approved by the town aforesaid, at a public town meeting, by a majority of the voters present and voting thereon.

SECT. 8. This act shall take effect from its passage.—[March 20, 1860.]

1861.

AN ACT to incorporate the Little Sipwissett Cranberry and Fishing Company in the Town of Falmouth.

(Ch. 74.) SECT. 1. *Be it enacted*, Barnabus Bowerman, Silas Gifford and Prince G. Moore, their associates and successors, are hereby made a corpo-

ration by the name of the Little Sipwissett Cranberry and Fishing Company, for the purpose of improving and regulating the Little Sipwissett Meadow in the town of Falmouth, by flowing and draining said meadow as the company shall deem best for the culture of cranberries, and also for the purpose of regulating and protecting the alewife fishery in a pond in said meadow, and in the river leading from said pond to Buzzard's Bay.

SECT. 2. Said company shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities set forth in the sixty-eighth chapter of the General Statutes.

SECT. 3. Whoever shall obstruct the passage of alewives between said pond and bay, in either direction, or, without the permission of said corporation, shall take any alewives from said pond or river, or shall set, drag or shoot any seine in Buzzard's Bay, within fifty rods of the mouth of said river, for the purpose of taking alewives therefrom, shall forfeit a sum not exceeding twenty dollars, which shall inure to the benefit of the company.

SECT. 4. This act shall take effect upon its passage.—[March 15, 1861.

AN ACT for the regulation of the Fisheries in the Town of Winchester.

[1789, 29; 1815, 54. Additional Act, 1864, ch. 234]

(Ch. 157.) SECT. 1. *Be it enacted*, The provisions of the act passed on the sixteenth day of February in the year of our Lord one thousand seven hundred and eighty-nine, entitled "An Act to prevent the destruction of the fish called shad and alewives in Mystic River, so called, within the towns of Cambridge, Charlestown and Medford, and for repealing all laws heretofore made for that purpose," and also the provisions of the act passed on the second day of February in the year of our Lord one thousand eight hundred and sixteen, entitled "An Act for the regulation of the fishery in Woburn," shall extend to the town of Winchester in the county of Middlesex, and to all the streams therein running from any of the ponds or other waters there into Mystic Pond, so called.

SECT. 2. "The committee for the preservation of fish," in the town of Winchester, may be elected either in the month of March or April, annually, and they shall be invested with all the powers and authority conferred by the acts aforesaid on the committees of the several towns therein mentioned.

SECT. 3. Nothing in this act shall be construed to repeal, modify or affect any of the provisions of the act entitled "An Act to supply the city of Charlestown with pure water," approved March twenty-eight, one thousand eight hundred and sixty-one.

SECT. 4. This act shall take effect upon its passage.—[April 9, 1861.

1862.

AN ACT to prohibit Seining near the Outlet of Lagoon Pond in Dukes County.

[1857, ch. 87.]

(Ch. 47.) SECT. 1. *Be it enacted*, No person shall set, draw or use any seine for taking fish, within fifty rods of the dike, creek or outlet of Lagoon Pond, in Dukes County, without first obtaining permission to do so from the Lagoon Pond Company in Dukes County.

SECT. 2. Any person violating this act shall, on conviction, pay a fine of twenty dollars, to be recovered before any court competent to try the same, for the use of said company.

SECT. 3. This act shall take effect upon its passage.—[February 28, 1862.]

AN ACT for the protection of Trout in Maple Spring Pond, in the Town of Wareham.

[Additional Act, 1863, ch. 110.]

(Ch. 58.) SECT. 1. *Be it enacted*, No person shall take any trout in Maple Spring Pond in the town of Wareham, or in the waters running into or flowing therefrom, from the fifteenth day of September in each year, to the fifteenth day of April in the year next ensuing; nor shall any person take any trout therefrom except by hooks and lines, nor without permission of the proprietor or proprietors.

SECT. 2 Any person offending against the provisions of this act shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Plymouth.—[March 6, 1862.]

AN ACT for the protection of Trout in Nye's Pond in the Town of Sandwich.

(Ch. 94.) SECT. 1. *Be it enacted*, No person shall take any trout in Nye's Pond in Sandwich or the stream running therefrom to Jeremy's Creek, so called, from the first day of August in each year to the first day of April in the year next ensuing; nor shall any person take any trout therefrom except by hook and line; nor shall any person enter upon the land bordering upon said pond or stream, at any season of the year, for the purpose of taking trout, without the written permission of the proprietors.

SECT. 2. Any person offending against the provisions of this act shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Barnstable.—[March 27, 1862.]

AN ACT for the protection of Fish in Little Quitticus Pond in the Towns of Lakeville and Rochester.

[Special Laws, v. 2, p. 516.]

(Ch. 202.) *Be it enacted*, Whoever takes or catches any fish in Little Quitticus Pond, so called, lying in the towns of Lakeville and Rochester and county of Plymouth, for a term of six years after the passage of this act, shall forfeit one dollar for every fish so taken.—[April 30, 1862.]

1863.

AN ACT concerning the Fisheries in Taunton Great River.

[Special Laws, v. 1, pp. 313, 354, 422; v. 2, pp. 192, 381, 469; v. 3, appendix, p. 20. 1815, chs. 111, 119; 1818, ch. 106; 1819, chs. 133, 137; 1822, ch. 38; 1829, ch. 55; 1832, chs. 44, 120; 1833, ch. 137; 1843, 73; 1844, ch. 62; 1855, ch. 401. Additional Act, 1866, ch. 54.]

(Ch. 73.) SECT. 1. *Be it enacted*, The provisions of chapter four hundred and one of the acts of the year eighteen hundred fifty-five, relating to the catching of shad and alewives in Taunton Great River and the Newmarket River, are hereby extended to all waters connected with the Newmarket River, within the towns of Middleborough and Lakeville.

SECT. 2. It shall be the duty of the fish-wardens chosen by the town of Middleborough, under the provisions of chapter four hundred and one, section nine of the acts of the year eighteen hundred and fifty-five, either personally or by the assistants by them appointed and employed, to use all needful care, watch and inspection to prevent any violation of any of the provisions of said act, from a point one mile and a half below the dam at Squawbetty Village up to the waters of Assawampscott Pond; the expense of which care, watch and inspection shall be paid by said town of Middleborough; and the other towns on said Taunton Great River shall annually pay to said town of Middleborough, for reimbursement for their share in the benefits to be derived by them for said care, watch and inspection, the sums following: the city of Fall River and the town of Freetown, ten dollars each; the towns of Somerset, Dighton, Berkley and Raynham, twenty dollars each; and the town of Taunton, thirty dollars. And the said town of Middleborough may recover the same in an action of contract, in any court of competent jurisdiction.

SECT. 3. Any person who shall beat upon the ground, or do any act whatsoever whereby said fish in said rivers shall be disturbed, driven, destroyed or delayed, from the first day of March to the tenth day of June in each year, contrary to the meaning and intent of the provisions of chapter four hundred and one of the acts of the year one thousand eight hundred and fifty-five, shall be entitled to all the pains and penalties named in the eleventh section of this act.

SECT. 4. This act shall take effect upon its passage.—[March 12, 1863.]

AN ACT to incorporate the East Falmouth Herring River Company in Falmouth.

(Ch. 81.) SECT. 1. *Be it enacted*, Henry F. Hatch, Benjamin H. Hatch, Robert H. Hatch and Isaac H. Hatch, their associates and successors, are hereby made a corporation by the name of the East Falmouth Herring River Company in Falmouth, and are empowered to open a brook or ditch through their own land from Ashumet Pond to Bourne's Pond, so called, and from thence to the Vineyard Sound, with full powers to regulate the same so far as is necessary for an alewife fishery; and for this purpose said corporation shall have all the powers and privileges, and be subject to all the duties, restrictions and liabilities set forth in the sixty-eighth chapter of the General Statutes.

SECT. 2. Whoever, without the permission of said corporation, shall take any alewives from said brook or river shall forfeit and pay a fine of five dollars, to be recovered before any court proper to try the same.

SECT. 3. All persons who may be owners of land through which said brook passes or which adjoins the same, may become members of said corporation; subject, however, to pay their proportional part of the expenses which shall have been incurred by said corporation before the time of their admission.

SECT. 4. If any damage shall be done by said corporation to the property of any person not a member thereof, such individual shall have an action of tort for the injuries. And the members of said corporation shall be jointly and severally individually liable for such damage in an action of tort, in any court having jurisdiction of the case; and any member of said

corporation of whom such damage has been collected, may have an action of contract against his co-members for contributions.

SECT. 5. If said brook crosses the highway where no bridge now exists, said corporation shall build a bridge over the same to the acceptance of the selectmen of the town of Falmouth, and be held to keep the same in repair.

SECT. 6. Nothing herein contained shall authorize said corporation to take or use the property of any person without his written consent.

SECT. 7. This act shall take effect upon its passage.—[March 12, 1863.]

AN ACT for the protection of Pickerel in Clapp's Pond.

(Ch. 89.) SECT. 1. *Be it enacted*, Richard C. Hartford, his heirs and assigns, are hereby entitled to the exclusive right to take pickerel from Clapp's Pond, so called, in the town of Provincetown, for the term of ten years from the passage of this act: *provided*, the consent of the owners of said pond be first obtained.

SECT. 2. Any person taking pickerel from said pond contrary to the provisions of this act, shall, on conviction in any court having jurisdiction of the offence, be fined not exceeding one dollar, to the use of the Commonwealth.—[March 14, 1863.]

AN ACT in addition to an Act to regulate the Fishery in Agawam and Half-way Pond Rivers.

[1838, ch. 19; 1844, ch. 65; 1853, ch. 377. Additional Act, 1867, ch. 344.]

(Ch. 117.) SECT. 1. *Be it enacted*, The committees annually chosen by the towns of Plymouth and Wareham, under the provisions of the eighty-ninth chapter of the acts of the year eighteen hundred and sixty, shall have a general superintendence and control of the alewife and shad fishery in the Agawam and Half-way Pond Rivers, and in any pond or stream communicating therewith, throughout the entire year for which they are elected, and until other committees are chosen and qualified in their stead.

SECT. 2. All persons, excepting those who may be engaged with their agents in taking said fish under the license of said committees, within the times limited by said committee, who shall take any of the fish called alewives or shad in any stage of their growth, at any time of the year, in either of said rivers or in any pond or stream communicating therewith, shall forfeit and pay not less than five nor more than fifty dollars for each and every offence, to be recovered in the same manner and to the use of said towns, as is provided in the seventh section of the act herein first before referred to.

SECT. 3. All acts and parts of acts inconsistent with the provisions of this act, are hereby repealed.

SECT. 4. This act shall take effect upon its passage.—[March 28, 1863.]

1864.

AN ACT to protect the Shad Fishery in the Connecticut River.

[Special Laws, v. 1, p. 269; v. 2, p. 154. 1812, ch. 103; 1835, ch. 137; 1852, ch. 122. Additional Act, 1868, ch. 130.]

(Ch. 62.) SECT. 1. *Be it enacted*, No person shall set, draw or sweep any seine or net the meshes of which are less than two and one-fourth inches square when new and dry, for the purpose of catching shad or any other

fish in that part of the Connecticut River which is within the limits of this Commonwealth, and below the dam across said river at Holyoke, between the first day of May and the fifteenth day of July, during each year.

SECT. 2. Every person violating the provisions of the preceding section shall be liable to a fine of not less than ten nor more than fifty dollars for each offence, to be recovered in any court competent to try the same; one half of said fine to enure to the use of the town in which the offence shall be committed, and the other half to the person who shall prosecute therefor.

SECT. 3. This act shall take effect upon its passage.—[March 2, 1864.

AN ACT to protect the Trout Fishery in Marshpee.

[1856, ch. 214; 1860, ch. 46.]

(Ch. 150.) SECT. 1. *Be it enacted*, No person shall take any trout in Quashnet River in the district of Marshpee, from the fifteenth day of September in each year, to the twentieth day of March in the year next ensuing.

SECT. 2. No person except the proprietor of said district shall take any trout in said river without a written permit from the treasurer of Marshpee, which shall specify the time when and the place where the person holding the same is allowed to fish; and no person shall at any time use any other means of taking trout in said river than by angling with hook and line.

SECT. 3. The said district may, by vote in legal meeting, with notice in warrant to that effect, make any regulations or by-laws respecting said fishery not repugnant to the provisions of this act; and the income from said fishery shall inure wholly to said district.

SECT. 4. Any person offending against the provisions of this act or any regulations or by-laws passed by authority of the third section of this act, shall forfeit and pay a fine of twenty dollars for each offence, to be recovered by prosecution before any trial justice for the county of Barnstable, for the benefit of said district.

SECT. 5. Any person who shall receive any trout knowing the same to have been taken from said river contrary to the provisions of this act, shall forfeit the sum of fifty cents for every trout so received.

SECT. 6. Said district, at any regular meeting, with notice in the warrant to that effect, may elect and appoint two or more fish-wardens to protect said fishery. All prosecutions under this act shall be commenced within one year from the time when the offence is committed.

SECT. 7. This act shall take effect upon the first day of May next.—[April 13, 1864.

AN ACT in relation to Fisheries in the Town of Winchester.

[Special Laws, v. 1, pp. 238, 512; v. 3, p. 98. 1815, ch. 54; 1820, ch. 67; 1861, ch. 157. Additional Acts, 1865, ch. 219; 1867, ch. 149.]

(Ch. 234.) SECT. 1. *Be it enacted*, All acts heretofore passed for the preservation of fish and the regulation of fisheries in the Mystic River, shall extend to the town of Winchester, and to all the ponds and streams therein; and the committee for the preservation of fish in said town shall have full powers to remove all obstructions to the passage of fish therein, during the time fixed by law for the free passage of fish.

SECT. 2. Nothing in this act shall be construed to affect any of the provisions of the act entitled "An Act for supplying the city of Charlestown with pure water," approved March twenty-eighth, in the year eighteen hundred and sixty-one.

SECT. 3. This act shall take effect upon its passage.—[May 12, 1864.]

AN ACT to regulate Seining in the Harbor of Mattapoissett.

[1865, ch. 183.]

(Ch. 259.) *Be it enacted*, No person shall set, draw or use any seine or net in the harbor of Mattapoissett or the waters flowing into said harbor, within a line drawn from Strawberry Point, on the easterly side of said harbor, to the most southerly point of Mattapoissett Neck, on the westerly side of said harbor, without the permission of the selectmen of Mattapoissett; and any person offending against the provisions of this act shall forfeit and pay the sum of twenty dollars for each offence, to be recovered by complaint before any trial justice, for the use of the complainant.—[May 13, 1864.]

AN ACT to restrict the Seining of Fish in the Harbor of Marion.

(Ch. 273.) SECT. 1. *Be it enacted*, No person shall set, draw or use any seine or net for taking fish in the harbor of Marion or in the streams running into said harbor, within a line drawn from Charles Neck Point, on the westerly side of said harbor, to Great Neck Point, on the easterly side of said harbor, without the permission of the selectmen of Marion.

SECT. 2. Any person violating this act shall, on conviction, pay a fine of not less than twenty nor more than fifty dollars, to be recovered before any court competent to try the same, for the use of said town.

SECT. 3. This act shall take effect upon its passage.—[May 13, 1864.]

1865.

AN ACT relating to the Alewife Fishery in Barker's River.

[Special Laws, v. 1, p. 269. 1814, ch. 128; 1848, ch. 116; 1852, ch. 66; 1853, ch. 350; 1856, ch. 83.]

(Ch. 47.) SECT. 1. *Be it enacted*, The selectmen or any committee for the time being, of the town of Pembroke, having in charge the regulation of the alewife fishery in Barker's River in said town, may, at their discretion, close the passage-ways above the weir upon said river for the passage of alewives to the Indian Ponds, so called, in Pembroke, and may take any other measures which they may deem necessary and which are not prejudicial to the rights of mill-owners, to obstruct and effectually prevent the passage of alewives above said weir: *provided*, that said selectmen or committee shall from the first running of alewives after the tenth day of April in each year, take and deposit, alive and in good condition, in said Indian Ponds, not less than two thousand alewives, so they may cast their spawn in said ponds.

SECT. 2. Alewives coming to said river after the number of two thousand shall have been deposited in said ponds as herein before required, may be taken on any secular day of the week and at any hour of the day, and disposed of under the direction of said selectmen or committee in the manner now provided by law.

SECT. 3. The mill-owners upon said weirs shall not be liable to any of the penalties now provided by law for not opening a passage-way for alewives around or through their respective dams while said passage-ways are closed by order as aforesaid; and nothing in this act shall be so construed as to abridge or impair the rights which any officers of said town now have by law to regulate the flow of water in said river.

SECT. 4. All acts and parts of acts inconsistent with this act are hereby repealed.—[February 27, 1865.

AN ACT to authorize the Town of Plymouth to establish Herring Fisheries in Eel River and Town Brook.

(Ch. 58.) SECT. 1. *Be it enacted*, The inhabitants of the town of Plymouth are hereby authorized to establish fisheries for herrings in the streams of said town known by the names of Eel River and Town Brook, and to locate weirs for taking herrings in said streams.

SECT. 2. The inhabitants of said town are further authorized to grant, for a period not exceeding twelve years from the passage of this act, the powers conferred by the same to such person or persons as they may in town meeting elect.

SECT. 3. At the expiration of the period of such grant, the fisheries in said streams shall be sold annually, under the direction of the selectmen of said town, and the proceeds paid into the treasury of said town.

SECT. 4. Any person interfering with said fisheries, disturbing the weirs located by authority of said town, or taking any herring in said streams except by such authority, shall be punished by a fine not exceeding ten dollars for such offence.

SECT. 5. No right is given by this act to the inhabitants of the said town of Plymouth to molest or disturb or in any manner interfere with any dams upon said streams, or private property upon the borders of said streams, without the consent of the owner or owners thereof.

SECT. 6. This act shall take effect upon its passage.—[March 6, 1865.

AN ACT concerning the Alewife Fishery in the Town of Wellfleet.

[Special Laws, v. 1, p. 200. 1836, ch. 56.]

(Ch. 85.) *Be it enacted*, The selectmen of the town of Wellfleet may, at the annual town meeting, sell the right to take alewives within the limits of said town, for any number of years not exceeding ten.—[March 16, 1865.

AN ACT to regulate the Herring or Alewife Fishery in Barlow's Pond and the Waters connected therewith in Mattapoisett.

(Ch. 183.) SECT. 1. *Be it enacted*, The town of Mattapoisett is hereby authorized to make the necessary improvements for the preservation and taking of herrings or alewives in Barlow's Pond and the waters connected therewith, and the outlet therefrom to the sea, and to do all acts necessary for the purpose of protecting and regulating a herring or alewife fishery in said waters.

SECT. 2. The inhabitants of said town may, at any legal meeting called for that purpose, make such by-laws, with penalties for violation of the same, and such rules and regulations as they may deem necessary for the

preservation and protection of said fishery and for the taking and disposal of said fish: *provided*, such by-laws are not inconsistent with the laws of this Commonwealth.

SECT. 3. The selectmen shall annually post up the regulations so established in two or more public places in said town, within ten days after their passage.

SECT. 4. If any person shall take any of said fish in any of the waters aforesaid at a time or in a manner other than shall be allowed by said town, such person shall for each offence, on conviction thereof, pay a fine not exceeding twenty dollars.

SECT. 5. The said town of Mattapoisett shall be liable to pay all damages that shall be sustained by any person in their property by the taking of any lands or by the construction of any dams, sluice-ways or other works or by flowage for the purpose of carrying this act into effect; and if any person sustaining damage as aforesaid, shall not agree with the selectmen of the town upon the damage to be paid therefor, the superior court holden within and for the county of Plymouth shall, upon the petition of such person, appoint three competent and disinterested persons to hear and award thereon; and their award or that of any two of them, being accepted by said court, shall be final: *provided*, that said petition shall be filed in the office of the clerk of said court within three years after such damage shall have been sustained, and not afterwards. Such person, if he shall so elect, may have his damages assessed and paid in the manner provided by law with respect to land taken for highway.

SECT. 6. If at any time it shall be apparent that the establishment of the herring fishery herein provided for shall have sensibly diminished the catch of herrings at the weirs upon Hammond's River, in said Mattapoisett and in Rochester, then such equitable indemnity shall be rendered to the owners of said Hammond's River fishery, in fish or otherwise, as the legislature shall determine.

SECT. 7. This act shall take effect upon its passage.—[May 1, 1865.]

AN ACT relating to the taking of Menhaden in the Waters of Buzzard's Bay and Vineyard Sound.

[1856, ch. 176. Additional Act, 1870, ch. 249.]

(Ch. 212.) SECT. 1. *Be it enacted*, From and after the passage of this act, it shall be lawful for any person to take menhaden by the use of the purse seine, so called, in the waters of Buzzard's Bay or of Vineyard Sound, or the waters of any bays, inlets or rivers bordering on or flowing into the same: *provided*, that no authority shall be hereby given to use any such seine at the mouth of any river where there now is or where there may hereafter be a herring fishery established by law, until after the fifteenth day of June in each year; and *provided, further*, that no authority shall be hereby given to use any seine in the waters around Nantucket or the islands belonging thereto.—[May 9, 1865.]

AN ACT for the protection of Alewives and other Fish in Mystic River.

[Special Laws, v. 1, pp. 238, 512; v. 3, p. 98. 1815, ch. 54; 1820, ch. 67; 1861, ch. 157; 1864, ch. 234. Additional Act, 1867, ch. 149.]

(Ch. 219.) SECT. 1. *Be it enacted*, No fish shall be taken within fifty rods of any fish-way now existing or hereafter to be constructed over or at any

dam in the towns of Medford, West Cambridge and Winchester, between the first day of April and the fifteenth day of June.

SECT. 2. Any person violating the provisions of this act shall be liable to a penalty of fifty cents for each and every fish so taken.

SECT. 3. All prosecutions under this act shall be commenced within thirty days from the time of the commission of the offence.

SECT. 4. This act shall take effect upon its passage.—[May 10, 1865.

AN ACT for the better Observance of the Lord's Day.

(Ch. 253.) SECT. 2. Whoever attempts to take or catch any fish on the Lord's day, by using any hook, line, net, spear or other implement, on any of the waters within this Commonwealth, shall, upon conviction thereof, be punished by a fine not exceeding ten dollars.

SECT. 3. All prosecutions under this act shall be instituted within thirty days from the time the offence is committed.—[May 6, 1865.

RESOLVES concerning the Obstructions to the passage of Fish in the Connecticut and Merrimack Rivers.

(Ch. 45.) *Resolved*, That his excellency the governor, by and with the advice and consent of the council, is authorized to appoint two commissioners, whose duty it shall be to cause observations to be made, during the months of May and June, of the height of the water upon the crests of the dams at Lowell, Lawrence and Holyoke, the heights of the flash-boards upon said dams, respectively, the right of the owners to maintain such flash-boards, and if they are uniformly maintained thereon during said months; also to ascertain the extent and degree of the discoloration of the water of said rivers below said dams caused by the discharge of dyestuffs and other noxious matter therein from the manufactories, and the effects of such matter upon the water and the fish inhabiting the same; and, further, to make inquiries and ascertain the best mode of constructing fish-ways over said dams, the expense of the same, and such further facts touching fish-ways and their usefulness in aiding the passage of fish over obstructions as such commissioners may deem useful or expedient.

Resolved, That said commissioners communicate with such commissioners as may be appointed by the states of New Hampshire and Vermont, upon the subject embraced in these resolutions; ascertain the legislation which has, from time to time, taken place in those states concerning the erection of dams in either of said rivers, and the height of said dams respectively; if fishways suitable for the passage of shad and salmon exist in said dams or any of them, and if said states possess the right to maintain or cause to be maintained suitable fish-ways for the passage of such fish up said rivers to their sources, or to any and what extent.

Resolved, That said commissioners ascertain, so far as practicable, the supply of shad and salmon in said rivers previous to any obstructions being placed therein, when such supply began to fail and the causes generally assigned for such failure, with such further information touching the value of the fisheries and the habits of the fish as may be attainable.

Resolved, That said commissioners make a report of their doings to the governor and council on or before the first day of December next.

Resolved, That the obligation of the Essex Company to rebuild a fish-way in their dam on Merrimack River, in accordance with their charter and

the prescription of the county commissioners of Essex county, be suspended until the first day of July, in the year one thousand eight hundred and sixty-six.

Resolved, That his excellency the governor be requested to transmit a copy of these resolutions to the governors of the states of New Hampshire and Vermont.—[May 3, 1865.

1866.

AN ACT in addition to an Act to regulate the Fisheries in Taunton Great River and the Newmarket River.

(Ch. 54.) SECT. 1. *Be it enacted*, The city of Taunton may hereafter sell its privileges of taking shad and alewives in Taunton Great River under the direction of its city council, instead of at a legal meeting to be held for that purpose, as required by the second section of chapter four hundred and one of the acts of the year eighteen hundred and fifty-five.—[March 2, 1866.

AN ACT to incorporate the Nantucket Fishing Company.

(Ch. 109.) SECT. 1. *Be it enacted*, Matthew Crosby, Joseph B. Macy, Joseph C. Chase, their associates and successors, are hereby made a corporation by the name of the Nantucket Fishing Company, for the purpose of carrying on a general fishing and freighting business; with all the rights and privileges, and subject to all the duties, liabilities and restrictions set forth in all general laws which now are or may hereafter be in force applicable to such corporations.

SECT. 2. Said corporation may hold such real and personal estate as may be necessary for the purpose aforesaid; but the capital stock of said company shall not exceed sixty thousand dollars, and shall be divided into shares of fifty dollars each.

SECT. 3. This act shall take effect upon its passage.—[March 26, 1866.

AN ACT to authorize Towns and Cities to establish Herring Fisheries.

(Ch. 187.) SECT. 1. *Be it enacted*, The mayor and aldermen of any city and the selectmen of any town in this Commonwealth, are hereby empowered to authorize, in writing, any three or more persons and their associates, to organize a corporation, with a capital stock of not less than one thousand and not more than five thousand dollars, for the purpose of opening outlets, canals or ditches for the introduction and propagation of herrings and alewives in the ponds, creeks and rivers within the limits of such town or city as aforesaid; and said corporation, when organized, shall have all the powers and privileges, and be subject to all the duties, liabilities and restrictions set forth in the sixty-first chapter of the General Statutes, and in all general laws which now are or may hereafter be in force relating to corporations.

SECT. 2. Such corporations may purchase and hold real estate necessary for the purpose of opening outlets, canals, sluice-ways or ditches for the passage of herring or alewife to and from said ponds and other waters.

SECT. 3. Towns and cities in their corporate capacity, may open ditches, sluice-ways or canals into any ponds within their limits, for the introduc-

tion and propagation of herrings and alewives, and for the creation of a fishery for the same; and the land for opening such ditches, sluice-ways or canals within such town or city, may be taken under the provisions of the statutes which now regulate and limit the taking of land for highways and other purposes.

SECT. 4. Any fishery so created by any town or city, shall be deemed to be the property of such town or city, and such town or city may make any proper regulations concerning the same, and may lease such fishery for a period not exceeding five years, upon such terms as may be agreed upon between such town or city and the lessees of the same. And any town may lease for a like period and upon like terms, any fishery now owned by such town, or any public fishery which has heretofore been regulated and controlled by such town.

SECT. 5. No person, without the permission of such town or city, or of the lessees of such fishery, in any fishery created by such town or city, or in any fishery created by any corporation, without the permission of said corporation, shall take, kill or haul on shore any herrings or alewives in any fishery so created by any town, city or corporation, for the introduction and propagation of herrings or alewives.

SECT. 6. Whoever violates any of the provisions of the preceding section, shall forfeit and pay a sum not less than five nor more than fifty dollars for each offence, to be recovered by prosecution before any court competent to try the same.

SECT. 7. All prosecutions under the preceding section shall be instituted within thirty days from the time the offence was committed.

SECT. 8. Nothing contained in this act shall be held to impair the rights of any person under any law heretofore passed, or to deprive any person of any right under any contract now existing, or to authorize any town, city or corporation to enter upon or build any canals or sluice-ways into any pond which is the private property of any individual or corporation.

SECT. 9. This act shall take effect upon its passage.—[April 25, 1866.]

AN ACT concerning the Obstructions to the passage of Fish in the Connecticut and Merrimack Rivers.

[1819, ch. 20; 1820, ch. 22. Additional Acts, 1867, ch. 289; 1869, ch. 422.]

(Ch. 238.) SECT. 1. *Be it enacted*, The governor, by and with the advice and consent of the council, is hereby authorized to appoint two persons to be commissioners of fisheries in the Merrimack and Connecticut rivers, who shall hold said office for the term of five years, unless sooner removed therefrom. And in case of any vacancy in said board the governor shall have power to fill the same.

SECT. 2. Said commissioners shall forthwith examine the several dams on said rivers in this Commonwealth, and shall, after notice to the owners of said dams, determine and define the mode and plan upon which fish-ways shall be constructed suitable and sufficient, in their opinion, to the free passage of salmon and shad up said rivers during their accustomed seasons.

SECT. 3. It shall be the duty of the commissioners appointed under this act, when they shall have determined upon the method and plan for such fish-ways, to submit a full and specific statement and description of the same to any board of commissioners empowered to act by the state of New Hampshire upon the same or similar subjects, for their approval.

SECT. 4. If any plan so submitted shall be approved by the said commissioners for the state of New Hampshire, the commissioners under this act shall forthwith, upon such approval being expressed, furnish a copy of the plan adopted for each dam to the proprietors thereof, and shall file a copy of each of such plans in the office of the secretary of the Commonwealth; with an affidavit of the fact that the same has been furnished to said proprietors, which affidavit shall be full proof of the facts therein stated.

SECT. 5. If the several proprietors of said dams shall consent to construct said fishways, according to the several plans adopted for their respective dams, at their own expense, the commissioners under this act may agree with the proprietors of the several dams so to do. And when the same shall have been constructed within such reasonable time as said commissioners shall prescribe, and according to said plans, with such minor variations therein as said commissioners shall approve, the said commissioners shall certify said construction to the secretary of the Commonwealth, and the same shall, for the period of five years from the passage of this act, be taken and deemed as in lieu of the fish-ways which said proprietors respectively are now required by law to keep and maintain over, at or around the respective dams. But said proprietors respectively shall be required to keep said fish-ways on their respective dams in good repair, and to maintain the same for the period of five years from the passage of this act to the satisfaction of said commissioners; and during the period of said five years the liability of said proprietors respectively to build and maintain the fish-ways now by law required of them shall be suspended.

SECT. 6. When said fish-ways shall have been constructed as aforesaid, the commissioners under this act shall prescribe in writing the times when the same shall be kept open and unobstructed, with power to change such times as they may deem judicious. And a copy of such prescriptions shall be served on each of such proprietors, and the certificate of said commissioners of the manner in which the same have been served shall be full proof of the fact.

SECT. 7. If any proprietor of any dam shall refuse or neglect, for the period of thirty days from the time said commissioners shall have furnished said proprietor with the plan, as herein before provided, to agree with said commissioners for the building at, over or around his dam of the fish-way prescribed by the plan furnished such proprietor by said commissioners, then said commissioners shall be authorized to contract in behalf of this Commonwealth for the construction of the fish-way at, over or around the dam of said proprietor so refusing or neglecting. And said commissioners shall thereupon cause such fish-way to be constructed with all reasonable despatch. And the expense thereof shall be a charge against the owner of such dam, and the same may be recovered of said proprietor in an action of contract in the name of the Commonwealth, with costs and twelve per cent. interest on the amount of such expense from the time when the same shall have been demanded of such proprietor by said commissioners.

SECT. 8. Whenever, in the construction of any such fish-way, the property of any person not liable by law to provide a suitable and sufficient fish-way at, over or around such person's dam, shall be taken for the pur-

pose of such fish-way, the said commissioners shall, upon the application in writing of the person aggrieved, assess a reasonable compensation therefor, to be paid by the Commonwealth. And any person aggrieved by such assessment shall have the right to have such compensation determined by a jury, in the manner provided by the General Statutes for the assessment of damages occasioned by the laying out of highways.

SECT. 9. Said commissioners shall have power to contract with the proprietor of any dam on either of said rivers, for the suspension for five years from the passage of this act of the liability of said proprietor to construct at his own expense any fish-way at, over or around his said dam, upon the payment of said proprietor to the treasurer of the Commonwealth of such a sum of money as said commissioners shall deem reasonable, and a copy of any such contract, attested by said commissioners, shall be filed in the office of the secretary of the Commonwealth.

SECT. 10. Said commissioners shall have power to contract with the Essex Company for the construction of the fish-way prescribed by said commissioners over the dam of said company, at Lawrence, by said company, at an expense to the Commonwealth not exceeding seven thousand dollars, the said Essex Company to pay the expense of such building over and above the said amount so to be paid by the Commonwealth.

SECT. 11. The compensation of each of said commissioners shall be determined by the governor and council.

SECT. 12. The commissioners appointed under this act shall have power to construct, or to contract for the construction of such appliances and structures as they may think essential or useful for the passage of the fish herein named, up and down said rivers, and for their protection in such passage.

SECT. 13. Said commissioners may in their discretion delay the definite construction of fish-ways on the Connecticut River, until they shall be satisfied that such legislation has been adopted by the state of Connecticut as shall in their opinion be necessary to secure the free passage of the fish above-named through the part of said river running through said state of Connecticut.

SECT. 14. There shall be appropriated and paid from the treasury of the Commonwealth a sum not exceeding seven thousand dollars, to defray the expenses of the commissioners herein created, and of constructing the fish-ways herein provided for.

SECT. 15. Any person who shall neglect or refuse to keep open or maintain any fish-way at the times prescribed by the commissioners under this act, shall forfeit the sum of fifty dollars for each day's neglect or refusal so to keep open or maintain said fish-ways, to be recovered by indictment in the county where said dam, or any part thereof, is situated, one half thereof to the use of the complainant and the other half to the use of the Commonwealth.

SECT. 16. This act shall take effect upon its passage.—[May 15, 1866.]

AN ACT for the protection of Trout and Black Bass.

(Ch. 249.) SECT. 1. *Be it enacted*, Whoever takes or catches any trout in any rivers, streams or ponds between the twentieth day of September and the twentieth day of March, or within the time aforesaid sells, buys or has in his possession any trout so taken within this state, shall forfeit one dollar for each trout so taken or caught, sold, bought or had in possession.

SECT. 2. Whoever shall take or catch any fish called black bass in any of the ponds within the limits of this Commonwealth from the first day of December to the first day of June, or at any time except with hook and line, shall forfeit a sum not less than two nor more than twenty dollars for each offence, to be recovered by prosecution before any court competent to try the same.

SECT. 3. In all prosecutions for forfeitures under the provisions of this act, the fact of sale, purchase or possession shall be evidence that the trout or black bass so sold, purchased or had in possession, were taken within this state.—[May 22, 1866.

RESOLVES in regard to Obstructions to the passage of Fish in the Connecticut River at Enfield Falls.

(Ch. 80.) *Whereas*, The Connecticut River in this state formerly furnished an inexhaustible supply of shad and other kinds of migratory fish, which fish have now partially disappeared from that portion of said river within this state; and *whereas*, there is nothing except the want of suitable fish-ways over the dam at Enfield Falls in the state of Connecticut to prevent the return of said fish from the sea to our waters in such numbers as largely to contribute to the supply of food for the inhabitants of this state; therefore,

Resolved, That the attention of the state of Connecticut be invited to this subject, and that said state be earnestly requested to take early measures to cause fish-ways to be constructed over the dam at Enfield Falls, either by requiring this work to be done by the proprietors of said dam or by exercising the right of eminent domain; said measures being due alike to the relations of comity between that state and this Commonwealth and to the local interests of that state.

Resolved, That the governor is hereby requested to transmit a copy of these resolutions to the governor of the state of Connecticut, with a request that the same be laid before the legislature of the said state.—[May 18, 1866.

1867.

AN ACT to amend Section fifteen of Chapter eighty-three of the General Statutes in relation to the Fisheries.

(Ch. 70.) SECT. 1. *Be it enacted*, Section fifteen of chapter eighty-three of the General Statutes is hereby amended by inserting the words "an inhabitant of this state," after the word "fisherman," in the third line.

SECT. 2. This act shall take effect upon its passage.—[March 16, 1867.

AN ACT for the protection of Trout in East Head in the Towns of Carver and Plymouth.

[Additional Act, 1869, ch. 334.]

(Ch. 86.) SECT. 1. *Be it enacted*, No person shall take any trout in the waters of the stream known as East Head in the towns of Carver and Plymouth, from the source thereof to the dam recently erected thereon by George P. Bowers, without the written permission of the proprietor or proprietors of the land bordering upon that portion of said stream: *provided*, such proprietors shall at all times keep an open and sufficient fish-way for the passage of trout at said dam.

SECT. 2. Any person offending against the provisions of this act shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Plymouth.—[March 23, 1867.

AN ACT for the Re-stocking of Mystic River and its Tributaries with Fish.

[Special Laws, v. 1, pp. 238, 512; v. 3, p. 98. 1815, ch. 54; 1820, ch. 67; 1861, ch. 157; 1864, ch. 234. Additional Acts, 1868, ch. 128; 1869, ch. 187.]

(Ch. 149.) SECT. 1. *Be it enacted*, The right to take alewives or shad from Mystic River or its tributaries or from Mystic Pond, shall be and hereby is suspended for the period of five years next ensuing, and no net, seine or weir shall be set therein during said period.

SECT. 2. Any person violating the provisions of this statute shall forfeit one dollar for every alewife or shad so taken.

SECT. 3. All prosecutions under this act shall be commenced within thirty days from the time of committing the offence.

SECT. 4. The several "committees for the preservation of fish" of the towns of Medford, Somerville, West Cambridge or Winchester may remove and destroy any and all nets, seines or weirs found in said waters during the said period of five years.—[April 13, 1867.

AN ACT to incorporate the Pasque Island Corporation.

(Ch. 200.) SECT. 1. *Be it enacted*, Welcome R. Beebe, Genio C. Scott, Peter Balen, their associates and successors, are hereby made a corporation on the island of Pasque in the town of Gosnold, by the name of the Pasque Island Corporation, for the purpose of erecting on said island houses and other buildings for residence and the propagation of fish; with all the powers and privileges and subject to the duties, liabilities and restrictions which now are or may be in force relating to such corporations; and with the right to close the outlets to creeks in said islands for the propagation of black bass or other fish.

SECT. 2. Seining or taking fish in any other mode than by hook and line within forty rods from the shores of Pasque Island is prohibited under a forfeiture for each offence of a sum not exceeding twenty dollars, and not less than five dollars, to be recovered in any court proper to try the same.

SECT. 3. Said corporation may hold real and personal estate to the amount of fifty thousand dollars, and mortgage and sell the same; and the whole capital stock of said corporation shall not exceed fifty thousand dollars, nor be less than twenty-five thousand dollars, divided into shares of one hundred dollars each: *provided*, that said corporation shall incur no liabilities until an amount equal to fifty per cent. thereof is subscribed and paid in, in cash.—[May 2, 1867.

AN ACT to regulate Fishing in Merrimack River, and for other purposes.

[1866, ch. 238. Additional Act, 1869, ch. 422.]

(Ch. 289.) SECT. 1. *Be it enacted*, No person shall fish with a seine in Merrimack River, nor in any manner take or catch shad, salmon or alewives in said river, until the fifteenth day of April, in the year eighteen hundred and seventy-one, under penalty of the forfeiture of the seine and

five dollars for each shad or alewife and fifty dollars for every salmon taken: *provided*, that the fish commissioners shall be allowed from time to time to take such fish as may be required to re-stock the Merrimack or any other river.

SECT. 2. No person shall fish within four hundred yards of any fish-way on Merrimack River, nor trespass within the limits of the same, under a penalty of fifty dollars.

SECT. 3. The fish commissioners are hereby empowered to cause any tributaries of the Merrimack River to be opened to the passage of shad, salmon and alewives, by directing the proprietors of dams in such tributaries to build suitable fish-ways over their dams.

SECT. 4. The mayor and aldermen of any city and the selectmen of any town bordering on the Merrimack River shall appoint one or more suitable fish-wardens and fix their compensation, to see to the execution of the provisions of the first and second sections of this act.—[May 31, 1867.

AN ACT to regulate Fisheries.

(Ch. 344.) SECT. 1. *Be it enacted*, The commissioners of fisheries appointed under chapter two hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six, in addition to their powers and duties under said act, are hereby authorized to examine all the dams upon rivers in this Commonwealth over and around which the proprietors are now required by law to keep and maintain fish-ways, and said commissioners shall determine whether said fish-ways are suitable and sufficient for the passage of such fish as are found in said rivers; and if, after inspection, the said commissioners shall find said fish-ways are unsuitable, or insufficient for the passage of fish, or are out of repair, or are not kept open at suitable times, they shall give notice to the proprietors of said dams of any defect in their fish-ways, or that the fish-ways are not kept open the proper time. And said commissioners shall further, in writing, prescribe the times for keeping open and unobstructed said fish-ways, and what repairs may be necessary, and what changes, if any, should be made for improving said fishways.

SECT. 2. Any person or corporation who shall neglect or refuse to keep open or maintain any fish-way at the times prescribed by the commissioners under this act, shall forfeit the sum of fifty dollars for each day's neglect or refusal so to keep open or maintain said fish-way, to be recovered by indictment in the county where said dam, or any part thereof, is situated, one half thereof to the use of the complainant, and the other half to the use of the Commonwealth.

SECT. 3. There shall be appropriated and paid out of the treasury of the Commonwealth a sum not exceeding ten thousand dollars, to defray the expense of the commissioners, first, in re-stocking the rivers of Massachusetts with shad, salmon and alewives; second, in re-stocking the ponds in this Commonwealth, for the purpose of propagating black bass and other fish.—[June 1, 1867.

1868.

AN ACT for the Protection of Trout in Grist-Mill Pond, in the Town of Wareham.

[1792, p. 441.]

(Ch. 110.) SECT. 1. *Be it enacted*, No person shall take any trout from Grist-Mill Pond, near the Parker Mills Iron Works, in the town of Wareham, or the waters running into the same, at any time of the year, without permission of the proprietor or proprietors of said pond and waters.

SECT. 2. Any person offending against the provisions of this act shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Plymouth.—[April 10, 1868.

AN ACT to amend "An Act for the Re-stocking of Mystic River and its Tributaries with Fish."

[1867, ch. 149; 1869, ch. 187.]

(Ch. 128.) SECT. 1. *Be it enacted*, The one hundred and forty-ninth chapter of the acts of the year one thousand eight hundred and sixty-seven, entitled "An Act for the re-stocking of Mystic River and its tributaries with fish," is hereby amended by adding to the second section thereof the words following, viz.: "*provided*, that the several committees for the preservation of fish mentioned in the fourth section, may take such fish as may be required to re-stock the said river and tributaries;" and also, by adding to the fourth section, after the word "Cambridge," the word "Woburn."

SECT. 2. Any person who shall place or cause to be placed in the waters of Mystic River or of its tributaries, or of Mystic Pond, or who shall cause to flow into said waters any substance which may destroy or injure the fish therein, shall be punished by a fine not exceeding fifty dollars for each offence.—[April 16, 1868.

AN ACT to regulate Fishing in Connecticut River.

[This Act repealed, 1869, ch. 76. Special Laws, v. 1, p. 296; v. 2, p. 154. 1812, ch. 103; 1835, ch. 137; 1852, ch. 122; 1864, ch. 62. Additional Acts, 1869, chs. 76, 384, 422; 1870, ch. 369. Resolve, 1868, 53.]

(Ch. 130.) SECT. 1. *Be it enacted*, Any person who shall take, or who shall aid or assist in taking from the Connecticut River any shad at any other time than between the fifteenth day of March and the fifteenth day of June in each year, shall forfeit and pay for each offence the sum of one hundred dollars.

SECT. 2. Any person who shall take, or aid or assist in taking from the Connecticut River any salmon before the fifteenth day of March, in the year one thousand eight hundred and seventy-two, shall forfeit and pay for each offence the sum of fifty dollars.

SECT. 3. Nothing in this act contained shall apply to the taking of any fish by order of the fish commissioners for the purpose of artificial or natural propagation of the same.

SECT. 4. The mayor and aldermen of any city, and the selectmen of any town, bordering on the Connecticut River, shall appoint and fix the compensation of one or more suitable persons as fish-wardens within their respective cities and towns, who shall make complaint of all offences under this act.—[April 17, 1868.

AN ACT for the Re-stocking of Ipswich River and its Tributaries with Fish.

[Special Laws, v. 1, pp. 191, 451; v. 2, p. 128; v. 3, p. 524. 1805, ch. 20; 1810, ch. 117; 1812, ch. 127; 1814, ch. 22; 1824, ch. 101; 1825, ch. 73; 1829, ch. 40; 1839, ch. 134; 1845, ch. 79; 1855, ch. 171; 1856, chs. 14, 52, 248.]

(Ch. 157.) SECT. 1. *Be it enacted*, The right to take alewives or shad from Ipswich River or its tributaries, or from Wenham Pond, shall be and is hereby suspended for the period of three years next ensuing, and no net, seine or weir shall be set therein during said period.

SECT. 2. Any person violating the provisions of this statute shall forfeit one dollar for every alewife or shad so taken.

SECT. 3. All prosecutions under this act shall be commenced within thirty days from the time of committing the offence.—[April 29, 1868.]

AN ACT for the Protection of Smelts.

[1869, chs. 64, 75.]

(Ch. 179.) SECT. 1. *Be it enacted*, Whoever catches any smelt from the first day of February to the first day of May in each year, in any manner whatever, or at any season of the year in any other manner than by hooks and lines or hand-nets, shall forfeit twenty-five cents for each smelt so caught, to be recovered by prosecution before any trial justice or court competent to try the same: *provided*, that nothing herein contained shall apply to any person catching smelt in any seine or net in Taunton Great River, while fishing for herring or alewives.

SECT. 2. The commissioners of river fisheries may take any kind of fish at any time for the purpose of obtaining spawn for artificial propagation of fish.

SECT. 3. All prosecutions under this act shall be instituted within thirty days from the time of committing the offence.—[May 4, 1868.]

AN ACT for the Protection of Trout in the Merrill Pond in the Town of Wendell.

(Ch. 289.) SECT. 1. *Be it enacted*, No person shall take any trout from the Merrill Pond, on the old Wendell town farm, in the town of Wendell, or the waters running into the same, at any time of the year, without permission of the proprietor or proprietors.

SECT. 2. Any person offending against the provisions of this act shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Franklin.—[June 4, 1868.]

AN ACT to protect Trout in Jones' Mill Creek in the Town of Barnstable.

(Ch. 290.) SECT. 1. *Be it enacted*, No person shall take any trout in Jones' Mill Creek, in the town of Barnstable, from its source to the junction with Scorton Creek, and within two hundred yards of said junction, on either side thereof, from the first day of August in each year to the first day of April in the year next ensuing; nor shall any person take any trout therefrom except by hook and line; nor shall any person enter upon the land bordering upon said pond or stream, at any season of the year, for the purpose of taking trout, without the written permission of the proprietors.

SECT. 2. Any person offending against the provisions of this act shall forfeit and pay a fine of one dollar for each trout taken, to be recovered by prosecution before any trial justice in the county of Barnstable.

SECT. 3. This act shall take effect upon its passage.—[June 4, 1868.

RESOLVE concerning a Fish-way over or around the Dam at Holyoke, on the Connecticut River.

[1868, ch. 130.]

(Ch. 53.) *Resolved*, That there be allowed and paid out of the treasury of the Commonwealth, and the same is hereby appropriated, a sum not exceeding twelve thousand dollars, to be expended under the direction of the commissioners appointed under chapter two hundred and thirty-eight of the acts of eighteen hundred and sixty-six, in the construction of a fish-way over or around the dam at Holyoke, on the Connecticut River, in accordance with the provisions of said chapter two hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six.—[June 4, 1868.

1869.

AN ACT concerning Fisheries in Bass River in the County of Barnstable.

[1868, ch. 179.]

(Ch. 64.) SECT. 1. *Be it enacted*, The provisions of chapter one hundred and seventy-nine of the acts of the year eighteen hundred and sixty-eight, shall not apply to the lessees of the towns of Yarmouth and Dennis, while fishing for perch or alewives in Bass River or its tributaries.

SECT. 2. This act shall take effect upon its passage.—[March 10, 1869.

AN ACT relating to the Fisheries in Dukes County.

[1868, ch. 179.]

(Ch. 75.) SECT. 1. *Be it enacted*, Chapter one hundred and seventy-nine of the acts of the year eighteen hundred and sixty-eight shall not apply to any person catching smelts in any seine or net in any of the waters of Dukes County, while fishing for herring or alewives.

SECT. 2. This act shall take effect upon its passage.—[March 17, 1869.

AN ACT to extend the provisions of the Act of the year eighteen hundred and sixty-eight to regulate Fishing in Connecticut River.

[1868, ch. 130. Additional Acts, 1869, chs. 384, 422; 1870, ch. 369.]

(Ch. 76.) SECT. 1. *Be it enacted*, Any person who shall take or aid or assist in taking, from the Connecticut River, any shad, at any other time than between the fifteenth day of March and the fifteenth day of June in each year, shall forfeit and pay for each offence the sum of one hundred dollars, and any person who shall take or aid or assist in taking from the Connecticut River any salmon before the fifteenth day of March in the year one thousand eight hundred and seventy-two, shall forfeit and pay for each offence the sum of fifty dollars.

SECT. 2. Nothing in this act contained shall apply to the taking of any fish by order of the fish commissioners, for the purpose of the natural or artificial propagation of the same.

SECT. 3. No person shall set or draw, or shall assist or aid in setting or drawing any net or seine for the purpose of taking fish in Connecticut River, at any time between the setting of the sun on Saturday evening of each week, and the rising of the sun on the succeeding Monday morning; and the owners of all weirs, pounds and set-nets of any description, placed in the waters of said river, shall cause the same to be and remain open and free for the passage of fish during the said period in each week, in such manner as to satisfy the fish commissioners. And every person who shall violate the provisions of this section, and every person owning or controlling, in whole or in part, any pound or weir, and failing to comply with the requirements of this section, shall forfeit and pay the sum of four hundred dollars to the treasurer of the state, for each offence; and any person setting or using or aiding or assisting in setting or using any pound, weir or set-net in said river between the fifteenth day of March and the fifteenth day of June in each year, the meshes whereof are less than five inches in extent, shall also forfeit and pay the sum of four hundred dollars for each offence, and such pounds, weirs and set-nets shall be forfeited to the Commonwealth.

SECT. 4. The mayor and aldermen of any city and the selectmen of any town bordering on the Connecticut River, shall appoint and fix the compensation of one or more suitable persons as fish-wardens, within their respective cities and towns, who shall make complaint of all offences under this act.

SECT. 5. Chapter one hundred and thirty of the acts of the year eighteen hundred and sixty-eight, is hereby repealed.—[March 17, 1869.

AN ACT to regulate the Seining of Fish in Cole's River and Lee's River in Swansea.

(Ch. 172.) SECT. 9. No person shall set, draw or use any seine, net or weir for taking fish, except menhaden, in Cole's River within the limits of the town of Swansea, nor in Lee's River within the limits of the towns of Swansea and Somerset. Whoever violates the provisions of this section shall pay a fine of not less than fifteen dollars nor more than fifty dollars.

SECT. 10. This act shall take effect upon its passage.—[April 17, 1869.

AN ACT for the protection of Trout in Avery Brook in the Towns of Charlemont and Heath.

(Ch. 235.) SECT. 1. *Be it enacted*, Whoever, without a written license from the owners or lessees of Avery Brook or its tributaries, takes any trout therefrom within the limits of either of the towns of Charlemont or Heath, shall forfeit and pay a fine of twenty-five dollars for every such offence, to be recovered before any trial justice or in any court of record in the county of Franklin.

SECT. 2. The foregoing section shall be without effect unless the owners or lessees aforesaid shall erect and maintain notices of this act and its penalties, painted or engraved in clear, legible letters; said notices to be erected within one hundred rods of each other throughout the entire length of said brook and its tributaries, and on or near the banks thereof, within the boundaries of the aforesaid towns.

SECT. 3. Whoever destroys, injures or defaces any such notices so erected, shall forfeit and pay for every such offence, a fine of twenty-five

dollars, to be recovered in the same manner as provided in section one of this act.—[May 6, 1869.

AN ACT for encouraging the Cultivation of Useful Fishes.

[Amended, 1870, ch. 360; 1871. chs. 113, 281, 293.]

(Ch. 384.) SECT. 1. *Be it enacted*, All the laws of the Commonwealth relating to the culture, preservation, capture or passage of fish, shall be known as the laws relating to inland fisheries.

SECT. 2. The commissioners under chapter two hundred and thirty-eight of the acts of eighteen hundred and sixty-six, shall be styled the Commissioners on Inland Fisheries, and shall be a board consisting of three persons appointed by the governor, by and with the advice and consent of the council, each for a term of five years from the time of his appointment. Vacancies in the board, by the expiration of the terms of service of the members or otherwise, shall, from time to time, be filled in like manner and for like terms of time.

SECT. 3. Each of said commissioners may, personally or by deputy, enforce all laws regulating inland fisheries; and may seize and remove, summarily if need be, all obstructions to the passage of migratory fish illegally used, except dams, mills or machinery, at the expense of the person using or maintaining the same.

SECT. 4. Whenever either of said commissioners finds that there is no fish-way or an insufficient fish-way in or around a dam where the law requires a fish-way to be kept and maintained, he may, at his discretion, enter with workmen and materials upon the premises of the person or corporation required to maintain said fish-way, and may improve said fish-way or cause one to be constructed where none exists, at the expense of said person or corporation, and may take, if necessary, the land of any other person or corporation not obliged by law to maintain said fish-way: *provided*, compensation shall be rendered to the owner thereof, in the manner provided in relation to land taken for highways, and said expense shall be charged against said person or corporation required by law to construct and maintain such fish-way, to be recovered in an action of contract in the name of the Commonwealth, with costs and interest at the rate of twelve per cent.: *provided*, that when a fish-way has been constructed in accordance with the provisions of this section, said commissioners shall not require the alteration of the same by the owner of the dam, within five years from the completion of the same.

SECT. 5. Said commissioners may take or cause to be taken, any fish at any time or manner for purposes connected with fish culture or with scientific observation.

SECT. 6. Each of said commissioners may, in the discharge of his duties, enter upon and pass through or over private property without rendering himself liable in an action for trespass.

SECT. 7. The riparian proprietors of any pond the superficial area of which is not more than twenty acres, and the proprietors of any pond or parts of a pond created by artificial flowage, shall have exclusive control of the fisheries therein existing, but this shall not abridge any rights heretofore granted to fish for herring or alewives in ponds of the above dimen-

sions which are connected with salt water, nor affect any previous laws restricting fishing for any period of time.

SECT. 8. The fishery of any pond the superficial area of which is more than twenty acres, shall be public, except such as may have been granted specially by law or leased as hereinafter provided, and all persons shall, for the purpose of fishing, be allowed reasonable means of access to the same without rendering themselves liable to prosecution or action for trespass.

SECT. 9. The commissioners, or any two of them, may, in the name of the Commonwealth, lease any great pond exceeding twenty acres in area, for the purpose of cultivating useful fishes, for such periods of time and on such terms and conditions as shall seem to said commissioners most for the public good; and the lessee of such pond may occupy a portion, not exceeding one-tenth part thereof, with inclosures and appliances for the cultivation of useful fishes; but this shall not affect any public rights in such pond other than the right of fisheries; and the appliances and inclosures used by the lessee shall be so placed as not to debar ingress to or egress from such pond at proper places.

SECT. 10. The commissioners shall have the custody of all leases made under the provisions of this act, and may cause any agreements, rights, reservations, forfeitures and conditions therein contained to be enforced, and for that purpose may institute proceedings in the name of the Commonwealth, and may take possession of any premises, for conditions in such lease thereof being broken, and revesting the Commonwealth therewith, may again lease the same.

SECT. 11. The county commissioners for each county shall, upon the request and at the expense of any party claiming to be interested in any great pond, cause the same to be measured, and such measurement, when determined, shall be recorded in the town clerk's office of each town within which said pond is situated; and said measurement shall take place in the month of July, and no arm or branch shall be computed as a part of any pond unless said arm or branch be at least fifty feet in width and one foot in depth.

SECT. 12. The riparian proprietors of any pond of less area than twenty acres, shall have all the privileges given them by section seven as soon as the said county commissioners have determined that their ponds do not exceed the above limit.

SECT. 13. Any pond within the limit of twenty acres in area, bounded in part by land belonging to a town or county of the Commonwealth, shall only become the exclusive property of the individual proprietors as to the fisheries therein upon payment to the town treasurer, county commissioners or state treasurer, of a just compensation for their respective rights therein, to be determined by a board of three persons, one of whom shall be one of the riparian proprietors of said pond, one the chairman of the board of selectmen, if the rights of a town are in question, or of the county commissioners, if the rights of a county or the Commonwealth are in question, and one to be appointed by the commissioners on inland fisheries.

SECT. 14. For the purposes of this act, no tidal stream shall be considered navigable above the point where on the average throughout the year it has a channel less than forty feet wide and four feet deep during the three hours nearest the hour of high tide.

SECT. 15. The governor, with the advice and consent of the council, upon the recommendation of the commissioners on inland fisheries, may limit or prohibit for a period not exceeding five years at a time, fishing in the navigable tidal waters of specified streams and in the unnavigable waters of streams, except in such portions as may be inclosed, according to the provisions of section sixteen; and whoever fishes in streams whose fishery is thus limited or prohibited shall forfeit for the first offence ten dollars, and for every subsequent offence fifty dollars, and shall in addition forfeit all fish captured and apparatus used.

SECT. 16. Any riparian proprietor may, within the limits of his own premises, inclose the waters of a stream not navigable, for the cultivation of useful fishes: *provided*, he furnishes a suitable passage for migratory fishes naturally frequenting such waters.

SECT. 17. The governor, by and with the advice and consent of the council, may, for the purposes of this act, arbitrarily fix and define the tidal bounds and mouths of streams, upon recommendation of the commissioners on inland fisheries.

SECT. 18. Fishes artificially propagated or maintained shall be the absolute property of the person propagating or maintaining them.

SECT. 19. Whoever fishes in that portion of a pond, stream or other water in which fishes are lawfully artificially cultivated or maintained, without the permission of the proprietors, shall forfeit not less than one dollar nor more than twenty dollars for the first offence, and not less than five nor more than fifty dollars for any subsequent offence.

SECT. 20. Any person legally engaged in the artificial culture and maintenance of fishes may take them in his own waters how and when he pleases, and may have them in his possession for purposes properly connected with said culture and maintenance, and may at all times sell them for these purposes, but shall not sell them for food at seasons when their capture is prohibited by law.

SECT. 21. Whoever, between the fifteenth of April and the fifteenth of December in each year after this year, uses any sweep-seine or hand or dip-net in the waters of the Connecticut, Westfield, Deerfield, Miller's, Merimack, Nashua or Housatonic Rivers or their tributaries, having a mesh which stretches less than five inches when new and dry, shall forfeit for the first offence twenty-five dollars and for every subsequent offence fifty dollars; and in each case shall also forfeit the apparatus thus unlawfully used and the fish captured.

SECT. 22. Whoever uses any sweep-seine or combination of sweep-seines in such a manner as at any moment to close or seriously obstruct more than two-thirds of the width of the stream at the place where it is used; and whoever delays or stops in paying out or hauling any sweep-seine within one-half mile of a point where such seine has been hauled within an hour, shall be liable to the same penalties and forfeitures set forth in the preceding section: *provided*, that this section shall not apply to the seines used in the smelt fishery; and *provided, further*, that none of the provisions of this section shall affect the fisheries for shad and alewives in Taunton Great River.

SECT. 23. Whoever at any time obstructs with a salmon-pot more than one-half of a waterfall, channel or rapid, or sets, uses or maintains in any of the waters of this state a salmon-pot the diameter of which is more

than two feet, or who, when the taking of salmon is forbidden by law, sets, uses or maintains in any of such waters, any salmon-pot whatever, shall forfeit said salmon-pot and all fish captured, and shall pay ten dollars for the first offence and twenty dollars for every subsequent offence.

SECT. 24. Whoever takes salmon, shad or alewives in any of the waters of this Commonwealth except the Connecticut, Taunton Great, Newmarket and Merrimack Rivers or their tributaries, in any other manner than by naturally or artificially baited hook and hand-line, on any day of the week but Monday, Wednesday, Friday and Saturday, shall forfeit for each offence the penalties prescribed for taking these species of fish at seasons prohibited by law.

SECT. 25. Every clerk, superintendent or other officer having charge of a market, provision store or other place where fish are sold, shall immediately inform a constable or a trial justice in the town or city where said premises are situated, when any fish which have been taken in violation of law, has been offered for sale on said premises: *provided*, that such clerk, superintendent or other officer shall know or have reasonable cause to believe that said fish has been so taken; and for each neglect so to do, such clerk, superintendent or other officer shall pay a fine of not less than five dollars nor more than fifty.

SECT. 26. Whoever takes or catches fishes which at any season frequent fresh water, except eels and pickerel, in any other manner than by artificially or naturally baited hook and hand-line, hand or dip-net, sweep-seine or salmon-pot, shall forfeit a sum not less than five dollars nor more than fifty dollars: *provided*, that nothing herein contained shall authorize the taking or catching of trout, land-locked salmon or lake trout in any other manner than by hook and hand-line; and *provided*, that towns may be allowed to permit the use of set-nets for the capture of herring or alewives.

SECT. 27. Whoever takes or catches any salmon within the limits of this Commonwealth, or who buys, sells or has in possession the same taken within said limits, between the first day of August and the first day of May, shall forfeit for each offence not less than ten nor more than fifty dollars; and whoever buys, sells or has in possession any young salmon less than one foot in length shall forfeit five dollars for every young salmon of said dimensions bought, sold or had in possession.

SECT. 28. Whoever takes or catches any trout, land-locked salmon or lake trout within the limits of this Commonwealth, or buys, sells or has in possession the same taken within said limits between the twentieth day of September and the twentieth day of March in each year, or takes or catches any trout, land-locked salmon or lake trout with any net or salmon-pot, at any season of the year, shall forfeit for each offence a sum not less than one nor more than twenty dollars.

SECT. 29. Whoever catches any shad at any other season than between the first day of March and the fifteenth day of June, shall forfeit for each shad, five dollars.

SECT. 30. Whoever takes or catches any black bass in any of the ponds or streams of this Commonwealth from the first day of December to the first day of June in each year, or at any time except with naturally or artificially baited hooks and hand-line, or buys, sells or has in possession any such fish taken within the limits of this Commonwealth, shall forfeit for each offence not less than two nor more than twenty dollars.

SECT. 31. Whoever takes or catches any smelts or white perch, in any of the waters of this Commonwealth, in any other manner than by naturally or artificially baited hooks and hand-lines, between the fifteenth day of March and the first day of June, in each year, or takes or catches any smelts with a net of any kind, on any known spawning ground within said Commonwealth, shall forfeit for each smelt so taken or caught, the sum of twenty-five cents: *provided*, that nothing herein contained shall apply to any person catching smelts in any seine or net in Taunton Great River, or in Dukes County while fishing for herring or alewives, or to the lessees of the towns of Yarmouth and Dennis, while fishing for perch or alewives in Bass River or its tributaries, or to any person lawfully fishing for perch, herring or alewives in either branch of Westport River.

SECT. 32. Actions and prosecutions under the laws relating to inland fisheries shall not be commenced except within four months from the time when the cause of action accrues or the offence is committed.

SECT. 33. One-half of the money recovered as a penalty in any case arising under the laws relating to inland fisheries, shall be paid to the person making the complaint in the case in which the same is recovered, and the remainder to the Commonwealth.

SECT. 34. The two hundred and forty-ninth chapter of the acts of the year eighteen hundred and sixty-six, and the one hundred and seventy-ninth chapter of the acts of the year eighteen hundred and sixty-eight, and all legislation heretofore enacted limiting the time and season when pick-erel may be taken, are hereby repealed.—[June 12, 1869.

AN ACT in addition to an Act concerning the Obstructions to the Passage of Fish in Connecticut and Merrimack Rivers.

[1866, ch. 233.]

(Ch. 422.) SECT. 1. *Be it enacted*, Whenever any proprietor of any dam in Massachusetts, upon the Merrimack or Connecticut Rivers, shall have refused or neglected for the period of thirty days from the time when the commissioners of fisheries shall have furnished such proprietors with the plan specified in sections three, four and five of chapter two hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six, to agree with said commissioners for the building on, over or around his dam of the fish-way prescribed by the plan furnished such proprietors by said commissioners, then said commissioners, or the survivors or survivor of them, or their successors or successor, may file in the supreme judicial court a bill in equity, in their name but in behalf of said Commonwealth, asking for a decree to enforce the immediate construction and erection of such fish-way as is called for by the plan so furnished, to the acceptance of said commissioners, and for such further and other relief as they may deem necessary to enable them to enforce the provisions of said chapter two hundred and thirty-eight.

SECT. 2. Such proceeding, whether by bill to enforce specific performance or by suit at law, as is provided in section seven of said chapter two hundred and thirty-eight, for money expended, shall be brought in the supreme judicial court, may be made returnable in the county of Suffolk, and shall have precedence upon the docket and priority in all its stages over suits depending between private parties.—[June 21, 1869.

RESOLVE making an Appropriation for Fish-culture.

(Ch. 28.) *Resolved*, That there be allowed and paid out of the treasury of the Commonwealth, and the same is hereby appropriated, a sum not exceeding twenty-five hundred dollars, to be expended under direction of the commissioners appointed under chapter two hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six, for purposes connected with the culture of useful fishes and of stocking the waters of the Commonwealth therewith.—[April 10, 1869.]

1870.

AN ACT to incorporate the Cape Cod Ship Canal Company.

(Ch. 36.) SECT. 17. The said canal company shall also make such suitable provisions for the continuance of the herring fishery in Monument River and Herring Pond as the commissioners on inland fisheries may prescribe; and in case of injury to any private fishery, shall pay to the owner thereof such damages as shall, upon the application of either party, be estimated by said commissioners, in a manner similar, so far as may be, to that provided in laying out highways; and with a similar right of appeal to a jury, by proceedings like those provided for in section six.

* * * * *

SECT. 25. This act shall take effect upon its passage.—[February 26, 1870.]

AN ACT for protection of the Fisheries in the Head-waters of Buzzard's Bay.

[1856, ch. 176; 1865, ch. 212.]

(Ch. 249.) SECT. 1. *Be it enacted*, No person shall draw, set, stretch or use any drag-net, set-net, purse or seine of any kind, or construct, maintain or use any fish-weir, yard or pound for taking fish of any kind anywhere in the waters of Buzzard's Bay northerly of or within a straight line extended from the entrance to the harbor in West Falmouth to Bird Island Light; thence in a straight line to Great Neck Point, on the Marion shore, nor in any bay, cove, inlet, river, creek or stream bordering on or flowing into said waters within the limits aforesaid.

SECT. 2. Whoever violates any provision of this act, or aids or assists in violating the same, shall forfeit and pay to the use of any person who shall sue therefor, a sum of not less than twenty dollars nor more than one hundred dollars, to be recovered in an action of tort, in any court having jurisdiction of either party to such action; and shall also upon conviction of any violation of any provisions of this act before any justice or court competent to try the same, be imprisoned in the house of correction not exceeding sixty days, or pay a fine of not less than ten dollars or more than one hundred dollars, one half to the use of the complainant and the other half to the use of the county within whose jurisdiction the offence was committed.

SECT. 3. Any net or seine used by any person in violating any provisions of this act, together with any boat, craft or fishing apparatus used in unlawfully working such net or seine, and all fish found therewith, captured contrary to any provision of this act, shall be forfeited to the Commonwealth.

SECT. 4. All nets and seines in actual use set or stretched in violation of this act within the waters and limits aforesaid, holding fish contrary to any provisions of said act, are declared to be common nuisances.—[May 16, 1870.

AN ACT for the protection of the Fisheries in the Vicinity of Nantucket.

[1833, ch. 211; 1850, ch. 6; 1855, ch. 156; 1858, ch. 95.]

(Ch. 284.) SECT. 1. *Be it enacted*, It shall not be lawful for any person or persons to take any fish with any kind of net, or to set any net for the purpose of taking any fish therewith, within one mile from the shores of Nantucket, Tuckernuck, Smith's, Muskegat and Gravel Islands, without first obtaining permission of the selectmen of Nantucket.

SECT. 2. Every person violating any provision of this act, shall forfeit and pay for each offence a sum not less than fifty nor more than five hundred dollars.

SECT. 3. The town of Nantucket is hereby authorized to choose, at the annual town meeting, or at any meeting duly warned for that purpose, such number of fish-wardens as may at the time be deemed necessary, who shall be sworn to the faithful discharge of their duty, whose duty it shall be to prosecute for every offence against any provision of this act.

SECT. 4. All vessels, boats, craft and apparatus of every kind employed in taking fish contrary to the provisions of this act, or having on board any such fish unlawfully taken, shall be liable for any fines, penalties and forfeitures, also costs herein provided for, and may be attached on mesne process, and sold on execution as the property of the person or persons offending by the use thereof. And it shall be the duty of said fish-wardens to seize such vessel, boat, craft or apparatus, and detain the same not exceeding forty-eight hours, in order that the same may be attached or arrested by due process of law: *provided, however*, that as soon as the master or owner of such vessel, boat, craft or apparatus shall pay the penalty required by the fish-wardens, to the treasurer of the town of Nantucket, together with the accrued costs, such vessel, boat, craft or apparatus shall be discharged with the effects therein; and the ninth clause of section thirty-two of chapter one hundred and thirty-three of the General Statutes is hereby so modified that it shall not apply to boats, fishing tackle and nets taken under the provisions of this act.

SECT. 5. All fines, penalties and forfeitures recovered and received by virtue of this act, shall go, one half to the treasurer of the town of Nantucket, for the use of said town, the other half to the fish-warden or fish-wardens commencing the action; and said fines, penalties and forfeitures may be recovered, together with the legal costs of suit, by an action of tort in any court of record proper to try the same.

SECT. 6. Chapter six of the acts of the year eighteen hundred and fifty, chapter one hundred and fifty-six of the acts of the year eighteen hundred and fifty-five, and chapter ninety-five of the acts of the year eighteen hundred and fifty-eight are hereby repealed.

SECT. 7. This act shall take effect upon its passage.—[May 27, 1870.

AN ACT to amend an Act for encouraging the Cultivation of Useful Fishes.

(Ch. 360.) SECT. 1. *Be it enacted*, Section nine of chapter three hundred and eighty-four of the acts of the year eighteen hundred and sixty-

nine is hereby so amended that the commissioners on inland fisheries shall have no authority to lease any great pond exceeding twenty acres in area, situated within the limits of Dukes County.

SECT. 2. This act shall take effect upon its passage.—[June 15, 1870.]

AN ACT in relation to the taking of Shad in the Connecticut River.

[1868, ch. 130; 1869, ch. 334.]

(Ch. 369.) SECT. 1. *Be it enacted*, The limitation of time for catching shad in the Connecticut River in this state shall hereafter be the same as that now fixed, or which shall hereafter be prescribed by the legislature of Connecticut for taking shad in said river in that state.

SECT. 2. All acts and parts of acts inconsistent with this act are hereby repealed.

SECT. 3. This act shall take effect upon its passage.—[June 18, 1870.]

AN ACT to prohibit the taking of Black Bass in Lake Cochituate.

(Ch. 382.) *Be it enacted*, Whoever catches, takes or destroys any black bass in the waters of Lake Cochituate in the towns of Natick, Wayland or Framingham in the county of Middlesex, shall forfeit for each offence not less than ten nor more than fifty dollars.—[June 21, 1870.]

RESOLVE making appropriation for Fish Culture.

(Ch. 41.) *Resolved*, That there be allowed and paid out of the treasury, a sum not exceeding four thousand dollars, to be expended under direction of the commissioners on inland fisheries, for purposes connected with the culture of useful fishes and of stocking the waters of the Commonwealth therewith.—[May 12, 1870.]

1871.

AN ACT for the better protection of Black Bass.

[1869, ch. 384.]

(Ch. 113.) SECT. 1. *Be it enacted*, That in section thirty of chapter three hundred and eighty-four of the acts of the year eighteen hundred and sixty-nine, the word July be substituted for the word June.

SECT. 2. This act shall take effect upon its passage.—[May 22, 1871.]

AN ACT to protect an Alewife Fishery in Sandwich.

(Ch. 189.) SECT. 1. *Be it enacted*, Barzilla Sears, of the town of Sandwich, his heirs and assigns, shall have, for the term of twenty years from the date of the passage of this act, the exclusive right to take and catch alewives in the stream known as Mill River, running over the mill-dam of said Sears and through the marshes of said Sandwich to the waters of Sandwich Harbor, on Monday, Wednesday, Friday and Saturday in each week, and at no other time: *provided*, that said Sears, his heirs and assigns, shall construct and maintain a good and sufficient passage-way over or around the dam or dams which now are or which may hereafter be erected upon said stream, to enable fish to enter the ponds above such dam or dams, and

shall keep such passage-way open and unobstructed from the tenth day of April to the first day of June inclusive, in each year.

SECT. 2. Any person or persons taking alewives in said Mill River or the said ponds, without the written consent of said Barzilla Sears, his heirs or assigns, shall forfeit and pay for every such offence the sum of ten dollars, one-half of the forfeiture to the use of the person making the complaint, and one-half to said Sears, his heirs and assigns, to be recovered in any court of competent jurisdiction.—[April 14, 1871.

AN ACT to amend an Act to regulate the Fisheries in Taunton Great River and Newmarket River.

(Ch. 258.) SECT. 1. *Be it enacted*, That so much of the fifth section of chapter four hundred and one of the acts of the year eighteen hundred and fifty-five as provides that no shad or alewives shall be taken in Taunton Great River above Berkley and Dighton Bridge, between the hours of twelve o'clock in the night following Thursday of each week, and four o'clock on Monday morning succeeding, from the first day of March to the tenth day of June in each year, including both of said days, is hereby repealed.

SECT. 2. Whoever catches any shad or alewives either in the Newmarket or Taunton Great River at any other season of the year than between the first day of March and the fifteenth day of June, shall forfeit for each shad five dollars, and for each alewife twenty-five cents.

SECT. 3. This act shall take effect from and after the first day of July next.—[May 9, 1871.

AN ACT in addition to an Act for encouraging the Cultivation of Useful Fishes.

[1869, ch. 384.]

(Ch. 281.) SECT. 1. *Be it enacted*, Whoever takes any fish the capture of which is forbidden by any of the provisions of chapter three hundred and eighty-four of the acts of the year eighteen hundred and sixty-nine shall, in addition to the penalties therein prescribed, forfeit any boat, net, line, rod or other apparatus used in such capture, in all cases where such forfeiture is not already provided for in said act.

SECT. 2. The proprietor of any unnavigable tidal stream, where the same empties into salt water and in which fishes are lawfully cultivated or maintained, shall control the fishery of said stream within his own premises; and also beyond and around the mouth of said stream so far as the tide may ebb: *provided*, it does not ebb more than eighty rods; and whoever fishes within the above described limits without the permission of the said proprietor shall forfeit not less than one dollar nor more than twenty dollars for the first offence, and not less than five nor more than fifty dollars for any subsequent offence, and shall in addition forfeit any boat, net, line, rod or other apparatus used in such illegal fishing.—[May 12, 1871.

AN ACT to limit the Time for catching Alewife.

(Ch. 293.) *Be it enacted*, Section twenty-nine of chapter three hundred and eighty-four of the acts of the year eighteen hundred and sixty-nine is hereby amended by inserting after the word "shad," the words "or alewives," and also by adding after the word "dollars," the words "and for each alewife twenty-five cents."—[May 15, 1871.

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SEVENTH ANNUAL REPORT

OF THE

COMMISSIONERS

ON

INLAND FISHERIES,

FOR THE

YEAR ENDING JANUARY 1, 1873.

BOSTON :

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1873.

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Commonwealth of Massachusetts.

REPORT OF THE COMMISSIONERS.

To His Excellency the Governor and the Honorable Council.

The Commissioners on Inland Fisheries beg leave to present their Seventh Annual Report.

The case of the Commonwealth *vs.* Holyoke Water Power Company, decided by the highest judicial tribunal of this State, and appealed by the defendants to the supreme court at Washington, will undoubtedly be reached during the present term of that court. This company, with a persistency worthy a better cause, seem determined to contest every inch of ground, and to throw all obstacles possible in the way to prevent a passage for fish over their dam.

Annoying as this has been to the several States interested (which have waited from year to year for a decision upon this question), it nevertheless has not been without some advantage. The experience which the Commissioners have had in the construction of fishways will probably lead to a more successful passage-way over this dam than would otherwise have been built.

ALEWIVES (*Alosa Tyrannus*).

This easily cultivated fish is rapidly increasing. In many places where they had been entirely destroyed, the ponds have been re-seeded and fishways built over the dams to enable them to reach their spawning grounds. There are quite a number of small streams now producing annually, something over a hundred tons of food, sold at a price one-fifth of that of common beef. The investigations of Colonel Lyman and Professor Baird show pretty conclusively that

the decrease of these fish had a marked influence on the bay and shore fisheries. The immense number of alewives that formerly went down to and returned from the sea, attracted the larger fish inshore, by providing them with no inconsiderable amount of food. “The rule holds good for all animal life—where their meat is there will they be.”

SHAD (*Alosa Proestibilis*).

From the building of the Lawrence dam, to the closing of the Merrimac River in 1866, by an Act of the legislature, the shad had gradually decreased until all the seining grounds below the dam, except three, had been abandoned as worthless.

It is evident, from the limited extent of breeding grounds, and the excessive fishing, that had the State not taken some steps for their protection, the shad would all have been destroyed. No objection against the closing of the river was urged by the fishermen, and no complaint was made until within the last two years, when some of them discovered, through a violation of the law, that there had been a large increase of fish, since which they have been untiring in their endeavor to remove all restriction. It is a matter of regret that the fishermen of the Merrimac do not see and understand that the efforts in restocking the river are for their interest as well as rendering a simple act of justice to New Hampshire. Fish return to the place of their birth, and no matter how good the fishway may be at Lawrence, no considerable run of shad will ever pass over until they are bred in large numbers above. The increase of fish has largely increased the amount of spawn, and during the last two years over eight millions of young shad have been hatched and turned into the river, mostly above Lowell. Shad hatching was not commenced on the Merrimac until some time after the experiments were begun on the Connecticut. The fish were so reduced in numbers that but little could be expected in the beginning. As late as 1870, the whole number of shad taken at North Andover did not exceed 781; spawn, 2,160,000. The increase predicted for 1871 was realized, the number of fish taken, being 4,336; spawn, 4,530,000. Hatching was continued at North Andover, during the past season with the following results :—

DATE.	Shad taken.	Males.	Females.	Air at 6 A. M.	Water at 6 A. M.	Weather.	No. of Fish at each Sweep.	Spawn taken.	Time of Hauling Seine.
June 2,	69	50	19	58	63	Cloudy, . .	35, 16, 10, 6, 2, . .	50,000	5, 6.30, 7.30, 9, 10, P.M.
3,	60	38	22	54	63	Bright, . .	12, 15, 11, 8, 8, 6, . .	60,000	5, 6, 7, 8, 9.30, 10.30, P.M.
4,	46	32	14	58	60	Stormy, . .	1, 8, 12, 8, 6, 7, 4, . .	100,000	3, 4.30, 6, 7, 8.30, 9.30, 10.30, P.M.
5,	8	5	3	52	58	Very stormy, . .	—	—	—
6,	7	5	2	54	56	Clear, . .	0, 0, 6, 1, . .	—	1, 2, 5, 7, P.M.
7,	23	16	7	58	60	Pleasant, . .	11, 7, 5, . . A. M. P. M.	—	4.30, 6, 7.30.
8,	74	51	23	58	62	Changeable, . .	1, 2, 5; 11, 19, 21, 87, . . A. M. P. M.	50,000	8.30, 10, 11.30, A.M.; 1, 3, 4.30, 6, 7, P.M.
9,	85	58	27	62	64	Clear, . .	11, 12, 15, 13, 19, 8, 7, . . A. M. P. M.	40,000	5, 6, 7, 8, 8.30, 9.30, 10.30, P.M.
10,	132	91	41	62	64	Showers, . .	11, 13, 8; 15, 19, 21, 22, 15, 8, . . A. M. P. M.	225,000	8.30, 10, 12, A.M.; 1.30, 3, 4, 5, 6.30, 7.30, P.M.
11,	73	43	30	64	64	Clear, . .	8, 7, 9, 28, 10, 4, 5, . .	125,000	2, 3, 4, 5, 6.30, 7.30, 8.30, P.M.
12,	5	4	1	68	66	Severe showers, . .	0, 3, 2, . . A. M. P. M.	—	2, 3, 7.30, P.M.
13,	126	83	43	68	67	Clear, . .	22, 11, 8, 7, 27; 18, 12, 15, 6, . . A. M. P. M.	75,000	2, 3, 4, 5.30, 6.30, 7.30, 8.30, 9.30, 10.30, P.M.
14,	178	111	67	62	68	Showers, . .	25, 18, 16, 10, 37, 45, 24, 3, . . A. M. P. M.	200,000	1.30, 3, 4, 5, 6, 7, 8.30, 9.30, P.M.
15,	77	50	27	60	69	Clear, . .	0, 3; 8, 15, 30, 14, 7, . . A. M. P. M.	150,000	5, 6, A.M.; 2, 4, 6, 7, 8.30, P.M.

June 16,	32	15	17	60	68	Clear,	.	.	6, 8, 13, 5,	.	.	.	200,000	5, 6, 7.30, 9, P.M.
17,	45	29	16	62	70	Clear,	.	.	5, 3, 2, 17, 11, 7,	.	.	.	100,000	4, 5, 6, 7.30, 8.30, 10, P.M.
18,	51	30	21	65	72	Clear,	.	.	20, 9, 5, 6, 8, 3,	.	.	.	125,000	7, 8, 9 10, 11, 12, P.M.
19,	85	49	36	68	72	Clear,	.	.	2, 10, 15, 24, 18, 10,	.	.	.	200,000	4, 7.30, 8.30, 10, 11, 12, P.M.
20,	64	37	27	65	72	Clear,	.	.	8, 7, 19, 15, 114,	.	.	.	50,000	7.30, 8.30, 10, 11, 12, P.M.; 1, A.M.
21,	40	23	17	-	-	Clear,	.	.	9, 8, 10, 7, 6,	.	.	.	50,000	7, 8.30, 9.30, 11, 12, P.M.
22,	87	54	33	65	73	Clear,	.	.	30, 32, 15, 10,	.	.	.	150,000	8.30, 10, 11.30, 12.30, P.M.
23,	70	42	28	61	72	Cloudy,	.	.	25, 30, 10, 5,	.	.	.	150,000	8.30, 10, 11.30, 12.30, P.M.
24,	133	99	34	61	71	Cloudy,	.	.	80, 36, 11, 6,	.	.	.	350,000	8.30, 10, 11.30, 12.30, P.M.
25,	76	53	23	61	68	Rainy,	.	.	12, 44, 13, 7,	.	.	.	125,000	8.30, 10, 11.30, 12.30, P.M.
26,	111	92	19	62	20	Cloudy,	.	.	4, 55, 36, 13, 7,	.	.	.	150,000	4, 8.30, 10, 11.30, 12.30, P.M.
27,	38	26	12	62	71	Cloudy,	.	.	12, 15, 8, 3,	.	.	.	75,000	8.30, 10, 11.30, 12.30, P.M.
28,	32	14	18	62	71	Showers,	.	.	15, 12, 5,	.	.	.	200,000	8, 9.30, 10.30, P.M.
29,	21	6	15	72	73	Clear,	.	.	5, 12, 4,	.	.	.	100,000	8, 9.30, 11, P.M.
30,	26	4	22	72	73	Clear,	.	.	8, 12, 6,	.	.	.	200,000	8.30, 10, 11.30, P.M.
July 1,	20	8	12	75	74	Clear,	.	.	13, 5, 2,	.	.	.	100,000	8.30, 10, 12, P.M.

DATE.	Shad taken.	Males.	Females.	Air at 6 A. M.	Water at 6 A. M.	Weather.	No. of Fish at each Sweep.	Spawn taken.	Time of Hauling Seine.
July 2,	58	40	18	62	73	Cloudy, . .	19, 20, 19, . . .	125,000	8.30, 10, 12, P.M.
3,	40	17	23	76	74	Thunder storms,	15, 20, 5, . . .	250,000	8, 9.30, 12, P.M.
4,	19	6	13	72	75	Showers, . .	12, 5, 2, . . .	100,000	8, 9.30, 11, P.M.
5,	16	10	6	74	72	Clear, . .	10, 4, 2, . . .	100,000	8.30, 9.30, 11.30, P.M.
6,	26	1	19	66	74	Clear, . .	8, 5, 6, 1, . . .	150,000	8, 9.30, 11.30, P.M.
7,	37	6	31	65	74	Clear, . .	20, 12, 5, . . .	150,000	8.30, 10, 11.30, P.M.
8,	15	5	10	65	72	Showers, . .	10, 3, 2, . . .	100,000	8.30, 9.30, 11, P.M.
9,	16	3	13	70	74	Clear, . .	8, 5, 3, . . .	100,000	8.30, 10, 11, P.M.
10,	28	17	11	70	74	Showers, . .	20, 5, 3, . . .	100,000	8.30, 10, 11, P.M.
11,	31	14	17	66	74	Clear, . .	11, 15, 5, . . .	100,000	8.30, 10, 11.30, P.M.
12,	54	20	34	72	73	Clear, . .	36, 12, 6, . . .	300,000	8.30, 10, 11.30, P.M.
13,	17	9	8	-	-	Clear, . .	9, 4, 4, . . .	50,000	8.30, 10, 11.30, P.M.
14,	13	5	8	70	74	Clear, . .	6, 4, 3, . . .	50,000	8.30, 10, 11.30, P.M.
15,	16	7	9	72	75	Clear, . .	8, 5, 3, . . .	30,000	8.30, 10, 11.30, P.M.

July 16,	19	11	8	72	76	Clear,	.	.	12, 5, 2,	.	.	.	50,000	8.30, 10, 11.30, P.M.
17,	39	20	19	60	73	Clear,	.	.	20, 12, 7,	.	.	.	225,000	8.30, 10, 11.30, P.M.
18,	18	10	8	68	74	Cloudy,	.	.	6, 10, 2,	.	.	.	75,000	8.30, 10, 12, P.M.
19,	37	20	17	65	73	Cloudy,	.	.	20, 12, 5,	.	.	.	200,000	8.30, 10, 12, P.M.
20,	15	10	5	60	72	Clear,	.	.	8, 5, 2,	.	.	.	40,000	9, 10, 11, P.M.
21,	15	10	5	66	72	Clear,	.	.	11, 4,	.	.	.	50,000	9, 10.30, P.M.
22,	9	6	3	66	69	Clear,	.	.	6, 3,	.	.	.	—	8.30, 11, P.M.
23,	15	10	5	66	72	Clear,	.	.	8, 5, 2,	.	.	.	75,000	8.30, 10, 11.30, P.M.
24,	6	4	2	60	69	Clear,	.	.	6, 0,	.	.	.	5,000	8.30, 11, P.M.

The total catch was 2,447. Amount of spawn taken, 5,925,000, being 1,397,000 over last year. The catch of fish was not so great as that of the year previous. This was in part owing to the high water, frequent thunder-storms, and the fact that the number of days' fishing was considerably less. Near the close of the season the dry method of impregnation, elsewhere detailed, was used with excellent results. There has been an increased run of fish over the Lawrence fishway during the past season. Mr. A. C. Hardy was informed, on what he considered good authority, that a shad was taken last spring, with a dip-net, near Nashua.

On the Connecticut River, shad hatching was commenced by Seth Green, at Holyoke, in the spring of 1867, and with the exception of one year has been continued to the present time.

If there was any advantage to be gained by artificial propagation, some evidence thereof was to be looked for in 1870. To the surprise of the fishermen, who had laughed and made fun of Mr. Green and his shad-boxes, in the spring of 1870 the river swarmed with shad. Mr. John W. Bill, a gentleman long connected with the fisheries of the Connecticut, writes to the commissioners of that State:—

“Yours requesting my views concerning matters pertaining to your commission has been received, and in reply will say, I regard the artificial propagation of fish in the waters of our State as no longer a debatable question, but in fact an eminent success. For years I was skeptical on the subject, but the stern logic of facts is stubborn, and now I cheerfully acknowledge that that which I had considered visionary, or only theoretical, is fully sustained by incontrovertible evidence. For many years prior to 1870, the catch of shad in the river had been annually diminishing, until it seemed to be only a question of time when the shad, like the salmon fisheries, should be known only as one of the productions of the past; yet brighter days are dawning on this large interest. The number of shad taken from the river in 1870 and 1871, was greatly in excess of any year during the last decade, and the large increase of *small* shad was particularly noticeable during the last two fishing seasons, which practical fishermen, with scarcely an exception, attribute to their production by artificial means.”

Mr. J. Marston, of Old Lyme, writes:—

“At my seining ground the number of shad caught in 1863 was 2,531; in 1871, 7,000,—nearly double what was caught in any one of the four preceding years. The increase of small shad has been, for the last two years, very great; the number sometimes enclosed and drawn near shore has been perfectly astounding.”

Dr. Wm. M. Hudson speaking of the past season, 1872, says :—

“Shad were more plenty and cheaper this year than ever. The New York market was so completely glutted with them that the dealers refused to receive more than a certain number at any price.”*

The following extract from the report of the commissioners of Connecticut, gives the number of spawn hatched at Holyoke during the season of 1871 :—

“On the 15th of June your commissioners commenced at South Hadley Falls to take the ova from mature shad for the purpose of hatching them in boxes placed in the river, as has been done since 1867, with the single exception of the year 1869. Mr. Charles C. Smith was engaged as superintendent of the work, and it is but just to say that he gave his whole time and attention to it, and proved faithful and efficient.

“By the kindness of the Massachusetts Commissioners, expressed through Colonel Theodore Lyman, the hatching apparatus belonging to that State was placed at the disposal of the operators, and was used throughout the season. The taking of ova continued until the 10th of July, when the fish had decreased in numbers to such an extent as to make further attempts useless.”

* The price was reduced from *eighteen* to *three* dollars per hundred.

Table of Shad Hatching Operations at South Hadley Falls, 1871.

D A T E .	NUMBER OF SHAD TAKEN.								Estimated num-ber of Ova.	THERMOMETER.						FRY TURNED INTO THE RIVER.		General Remarks.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	1st HAUL.		2d HAUL.		3d HAUL.		4th HAUL.			IN OPEN AIR.		IN WATER.				Lot.	Hour.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Male.	Fem.	Male.	Fem.	Male.	Fem.	Male.	Fem.		6 A.M.	1 P.M.	6 P.M.	6 A.M.	1 P.M.	6 P.M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
June 15,	1	12	13	13	15	10	12	-	-	145,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[illegible]

TROUT (*Salmo Fontinalis*).

Establishments for breeding and growing this excellent fish are springing up all over the State. The improvements noticeable are, the dry method of impregnation and the adoption, by some of the leading culturists, of the wire trays for hatching purposes, described in former reports. The question of food for trout is also exciting some attention. Those who live near the seashore find an abundance of food in the shrimps, minnows and refuse fish. When these are not easily obtained, skim-milk thickened with rennet to the consistency of blanc-mange is undoubtedly the cheapest and best food to be had. Trout fed upon this alone, reached the weight of one-half pound in eighteen months from the time they were hatched. Whatever food may be adopted, the ponds and streams where they are kept should be so constructed as to yield the largest possible amount of natural food. In the Appendix will be found the plan of a pond, runways and hatching-house, built and owned by D. H. Gilbert and Son of Plymouth. A stream starting at the head of a meadow or swamp has been dammed at the lower side of the meadow, flowing about sixteen acres; the grass, bushes and trees have all been left standing, thereby affording shade for the fish, and yielding a great supply of insects for food. Mr. Gilbert has built spawning places at the head of the pond for his fish to spawn in. We think he attaches too much importance to this. There are instances where this arrangement could be used to advantage, but not in a place like Mr. Gilbert's, where there is every opportunity desired for taking the spawn and having it under control. The chief advantages of Mr. Gilbert's plan are, the large amount of natural food which it secures, the deep and the shallow water and the chance it gives the smaller fish to keep out of the way of the larger ones. This place was started two years and a half ago; the first sale of fish for food was made last spring, amounting to over six hundred dollars, leaving the pond well stocked with small fish and a large number of breeders. Through the kindness of Seth Green, we received, in January, three thousand spawn taken from Lake Superior salmon trout; these were hatched, and in May, a portion of them were turned into

Mystic Pond and the balance were retained for breeding purposes. From the New York State hatching-house, Seth Green distributes, annually, several hundred thousand of these fish over his State.

SALMON (*Salmo Sala*).

In consequence of the high price of salmon spawn, but little has been done toward stocking our rivers with this desirable fish. In the summer of 1870 something over 1,000 young salmon were turned into the Pemigewasset, 700 into the Mystic, and 2,000 into rivers on the Cape. Last spring almost every dealer in fish in Boston market had for sale young salmon weighing from two to three pounds, caught in the weirs and nets on both sides of Cape Cod. An inquiry at the fish markets in New York, showed that the dealers there had received quite a number of small salmon from this State. In Plymouth they were peddled out from the fish-cart. Last October a salmon weighing nine pounds was caught with hook and line in Massachusetts Bay and sold in Boston market at one dollar a pound. As no young salmon have been taken in the bay for the last twenty-eight years, it is evident that these fish were a part of those hatched by the State and put into the headwaters of our rivers. There was no necessity of destroying these salmon. They could easily have been put back into the water alive. As the State will have several hundred thousand young salmon to be distributed next spring, some law should be passed to protect them. In the spring of 1871 your Commissioners united with several of the New England States to procure salmon spawn, under the superintendence of Chas. G. Atkins, Commissioner of Maine. His plan was to buy salmon from the fishermen at the mouth of the Penobscot River and transport them to a small pond where they could be under control, until ready to spawn.

In this experiment Mr. Atkins met with several mishaps, which materially affected the results. Notwithstanding these drawbacks, the cost of spawn was reduced more than one-half from that charged by the Canadian Government Establishment at Newcastle where landlocked, or fresh-water salmon spawn is sold at \$40 per thousand in gold, as the true *Salmo Sala*. Massachusetts share of the spawn was 21,750 ;

from these 21,000 fish were hatched and distributed as follows:—5,000 into a small river on the Cape, and the balance carried to the headwaters of the Merrimac, and put into the Pemigewasset, near Plymouth, N. H., where these fish formerly cast their spawn.

Of those sent to the Cape there was a loss of only three fish in transportation, and less than three hundred of those taken to New Hampshire. Encouraged by the reduction in the price of spawn, and satisfied by the experience gained, that the mistakes of last year could be avoided, the Commissioners of Connecticut, Rhode Island, Maine and Massachusetts, decided to make further efforts, and accordingly arrangements were made with Mr. Atkins, for 1872. Soon after Professor Baird, United States Commissioner on fisheries, tendered the aid of the National Government. Mr. Atkins' success this season, fully justifies our expectation, having taken one million five hundred thousand salmon spawn, to be distributed among the States interested. These eggs are remarkable for the large number fecundated. As Mr. Atkins attributes much of his success to what is called the dry method of impregnation, we give a description of the process, as detailed by him :

“I will describe minutely the process of taking eggs that we pursued, since it differs essentially from that commonly pursued heretofore. One man takes a salmon by the tail, another puts her head under his arm, and thus the two hold her securely over a dry tin-pan, ordinarily a foot above it. The fish is held right side up and with the head highest, to facilitate the flow of eggs toward the vent. A steady pressure upon the belly near the head will commonly cause the eggs, if ripe, to flow in a continual stream into the pan. When the litter is nearly exhausted, it is necessary to stroke down the remainder of the eggs. If the fish be a very large one, or from any cause there is delay, she is not deprived of all her eggs at once, but allowed to rest. The eggs being taken, as soon as possible a male is brought over the pan and his milt expressed upon the eggs. Being of the consistence of cream, the milt does not immediately spread over all the eggs, but it is necessary to give them a motion over the bottom of the pan until the milt has come in contact with every egg. This is done by moving the pan rapidly in a horizontal circle, but perhaps brushing them with a feather would do as well. Now, and not sooner, water is added. Strange as it may seem,

there is good reason to think that the secret of success in the fecundation of salmon eggs is in keeping water away. The pan is now allowed to stand still some fifteen or twenty minutes, until the eggs loose their temporary hold on the tin, when they are turned into the hatching boxes."

FISHWAYS.

At the time the Commissioners of the several New England States were appointed, the only successful fishway known in the country, was what is called the Cape Cod Fishway. This consisted of a trench or sluice-way dug around the dam and the current checked by placing in it large stones at short intervals. This fishway answered very well for alewives. The objections to it were, that it was wasteful of water, and in some locations, owing to the nature of the bank, it was almost impossible to build it. To have enlarged this fishway sufficient for the passage of salmon and shad would have been a serious injury to many of the mill privileges. From these objections it was evident that it could not be adopted for general use. The Commissioners felt it to be a part of their duty to harmonize, as far as possible, the conflict that had existed for more than a century between the public rights and the private interests of mill owners. In Europe, salmon ladders have been in use for many years, but even there have undergone a considerable change, and a marked improvement has been made in many of them during the last few years.

What is known as the pool system, was at one time considered the best way to get fish over a dam, and this idea prevailed largely in this country.

Nothing appeared easier than for fish, which often shoot over a dam three or four feet high, to pass from one pool to another where the fall was only about one foot. Salmon are strong and active, and that they do, more or less, pass over this kind of fishway there appears to be no doubt, but some of the best judges in Europe complain of them as deficient in many respects. Without any practical knowledge or experience in matters of this kind, your Commissioners were suddenly called upon, by the demands of New Hampshire, to do what they had never done, and no one had sufficient information to tell them how to do it; namely, to build fishways over high dams, that would take, not only salmon, but all.

other kinds of fish over. The best engineers were consulted to little purpose. In the midst of this perplexity Mr. Nathan Foster, of Maine, came forward with the plan of a fishway which received the approval of the Commissioners of the New England States. It was thought by all parties to be just the thing wanted. It had been built at East Machias, over a dam about five feet high, and alewives were reported to have passed through in great numbers. Maine, New Hampshire, Connecticut and Massachusetts adopted this plan and built fishways accordingly. It differed from the salmon ladders of Europe in having the opening for the passage cut down to the bottom of the fishway, and the bulkheads or cross-pieces to check the water, placed obliquely instead of at right angles to the side. It is the same as that figured in this Report, Plate 1, except in the relative proportion of the openings to the width. This fishway was soon found to be defective. It not only carried out the old pool system, but each bay became one large whirlpool; a chip thrown into it remained there. A great many fish entered the first bay, less the second and so on decreasing up to the fifth or sixth, where they stopped and fell back giddy and drunk from the innumerable circles they had described in being obliged to keep their heads to the current. To obviate this difficulty it was narrowed so as to make the openings one-third the width of the fishway, causing the water to flow in a serpentine course. This change has made the fishway an excellent one for small streams and over low dams. The objections to it are, that it cannot be built over high dams, or increased in width and length, as may be required, without accelerating the flow of water to such an extent that the fish could not make headway against it. All these objections are removed in the fishway described on Plate 2. The force with which the water enters the first section in the fishway, is exhausted before entering the second, and no matter how high the dam or how great the volume of water to be let down, the flow will be found to be uniform, with no increased velocity at the bottom. The water is not broken into foam and the current is so slow that in a fishway six feet wide two feet deep and fifty-six feet long, with an inclination of one foot in nine, it took a column of water one foot wide and two feet deep, three minutes to fill it.

For salmon or shad this fishway should be built ten or twelve feet wide and two feet deep with two-foot openings. Even then it would not take as much water as a Foster fishway with a one foot-opening. As good fishways lie at the bottom of the successful culture of migratory fish, a great deal of study and attention has been paid to them, and the plans presented in this Report give the results of that labor. As far as they have been tested they are perfectly successful, taking so little water that all reasonable objections to them on the part of mill owners has been removed. During the past summer surveys and plans have been made for twenty-six fishways and part of them have been built, the high water in August and September interfering with the construction of some.

CONCLUSION.

In the economy of living, after bread and meat comes fish, by no means the least healthy of the three. As the population increases, the necessity of procuring additional food presses with increasing force upon the energy and resources of the people. The successful cultivation of fish is no longer a matter of doubt. Enough has been done to show that there is scarcely any limit to which it may not be carried. Especially is this true of migratory fish. Those who are impatient of results should remember that it takes three or four years from the time they are hatched before they are sufficiently developed to reproduce their species; that the labor of the Commissioners for the first few years was necessarily devoted to investigation and experiments; that with only one exception the more valuable fish in our rivers had been almost entirely destroyed. The salmon were all killed out. The Connecticut River alone afforded a sufficient number of shad to enable the Commissioners to test, promptly, the value of artificial propagation as a means of increase. The results heretofore stated lead to the conclusion that it will become, in time, universal.

Large sums of money are annually paid to maintain agricultural societies and yet the question of fish culture is one demanding quite as much attention. Every man who owns or hires a farm knows something about cultivating it; but if

there are ten or fifteen acres of water on it, his want of knowledge leads him to consider it so much waste on his farm, when in reality it may be made the most valuable part of it. In the opinion of one of the best fish culturists, with one-half the labor spent in cultivating the land, the same number of acres covered with water would produce double the value. The late Mr. Burlingame, Minister from China, stated, "that we had much to learn of those so-called barbarians, and among other things the cultivation of fish; that in China an acre of water is many times more productive than an acre of land." When it is remembered that there are in this State one hundred and ninety-six thousand three hundred and forty-two acres of land covered with water, some idea may be formed of its value under skilful cultivation. By a reference to a late report of the salmon fisheries of England we find that,—

"This important branch of national industry had, it is well known, fallen into almost absolute decay ten years ago; and yet, so prolific has been the produce of the salmon fisheries with careful cultivation, that last year the annual value was estimated, for England and Wales alone, at from £100,000 to £150,000.

"The Irish Inspectors on Fisheries in 1870 reported that 'they did not think they exaggerated the value of salmon fisheries (of Ireland) when they estimated them as being worth over £400,000 a year:' and to turn to another part of the kingdom, a calculation of the value of the salmon fishings in Scotland, made by a special commission appointed to inquire into the subject, placed it at £300,000 a year. Thus this one branch of the fisherman's calling produces, in one kind of the fish alone, on good authority, more than £850,000 a year, and this value is annually increasing."

The following statistics show the natural products of one river in this country :—

"A brisk business was driven this season in the Columbia River by the salmon catchers. There were taken between April 1 and August 1, 1872, for canning purposes, 170,000 fish, weighing, when dressed, 2,700,000 pounds, making 56,250 boxes of forty-eight pounds each, and worth at wholesale market prices, \$432,000. The salmon taken for curing purposes during the same season amounted in number to 162,500, weighing when dressed, 2,600,000 pounds,

making 13,000 barrels of 200 pounds each, and worth \$117,000. The total number of salmon taken on the lower Columbia River during the season of four months amounted to 332,500, weighing 5,300,000 pounds, and worth \$549,000. There were also large numbers sent to market for sale fresh."

The exorbitant price charged for salmon spawn has hitherto prevented any decided efforts to stock our rivers with this valuable fish. Fortunately the experiments of Mr. Atkins last year, and the appropriation by Congress this year, of fifteen thousand dollars to enable the United States Commissioner, Professor Baird, to co-operate with the Commissioners of the several States, have resulted in placing in our hands a large amount of salmon spawn at a moderate price. In Europe the various governments have established national hatching-houses from which spawn and young fish are distributed over the country. The State of New York has adopted a similar plan. The expectation of a large number of salmon spawn made it necessary that some provision should be made for hatching them. A small house situated on the land of B. F. Ham, of Winchester, has been obtained and enlarged to the capacity of one million of spawn. It is easy of access, convenient for distributing the fish and can be used when wanted by the State at a mere nominal rent. It is very desirable that your Commissioners should have the control of a small stream and pond for the purpose of keeping breeding fish, the spawn of which is difficult to obtain in any other way.

Frequent applications are made to this department for land-locked salmon, a large fresh-water fish, often weighing from ten to seventeen pounds, and no way inferior to the true salmon. Unlike the trout they will flourish in rivers and ponds already stocked with pickerel and bass, provided there is sufficient depth of water. Most of the ponds in this State would produce an abundant supply if they were once well established in them. With suitable arrangements, which could be had at small expense, hundreds of thousands of these young fish could be distributed annually.

There are several applications on file for stocking ponds in various parts of the State with black bass, which could not be complied with in consequence of the request being made

after the appropriation had been pledged in other directions. In the judgment of your Commissioners it is desirable to co-operate with the United States Commissioner and the several New England States for a further supply of salmon spawn; that the hatching of shad should be continued on the Merrimac and Connecticut Rivers, and that a supply of land-locked salmon should be provided for stocking ponds throughout the State. With ordinary success there will be in May and June, several hundred thousand young salmon to be transported to the headwaters of our rivers and streams. If the Holyoke case is decided in favor of the State, surveys will have to be made and plans drawn, and from the magnitude of the work a careful and constant superintendence will be required. To meet these and other incidental expenses we respectfully recommend an appropriation of five thousand dollars.

E. A. BRACKETT,
THOS. TALBOT,
Commissioners on Inland Fisheries.

COMMISSIONERS.

Salary and travelling expenses of Commissioners, \$1,646 38

GENERAL EXPENSES.

Salmon spawn enterprise, Orland, Me.,	\$1,000 00
Fish propagation, Merrimack River,	747 38
Moses Williams, Jr., legal expenses,	310 00
Improvements on sundry fishways,	312 91
Care of Lawrence fishway,	25 00
Salmon spawn and Alewives,	113 44
Plans of fishways and maps,	45 00
Labor and material on hatching-houses,	709 95
Printing blanks,	39 40
Postage and stationery,	19 75
Miscellaneous,	2 00
	<hr/>
	3,324 83
Total expenses,	<hr/>
	\$4,971 21

SUPPLEMENT.

[A.]

COMMISSIONERS ON FISHERIES THUS FAR APPOINTED.

UNITED STATES.

HON. SPENCER F. BAIRD,	Smithsonian Institute, Washington, D. C.
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MAINE.

E. M. STILWELL,	Bangor.
HENRY O. STANLEY,	Dixfield.

NEW HAMPSHIRE.

THOMAS E. HATCH,	Keene.
WILLIAM W. FLETCHER,	. . . . .	Concord.
W. A. SANBORN,	. . . . .	Weirs.

VERMONT.

M. C. EDMUNDS,	. . . . .	Weston.
M. GOLDSMITH,	. . . . .	Rutland.

MASSACHUSETTS.

THEODORE LYMAN,*	. . . . .	Brookline.
E. A. BRACKETT,	. . . . .	Winchester.
THOMAS TALBOT,	. . . . .	North Billerica.

CONNECTICUT.

WILLIAM M. HUDSON,	. . . . .	Hartford.
ROBERT G. PIKE,	. . . . .	Middletown.
JAMES A. BILL,	. . . . .	Lyme.

RHODE ISLAND.

NEWTON DEXTER,	. . . . .	Providence.
ALFRED A. REED, Jr.,	. . . . .	Providence.
JOHN H. BARDEN,	. . . . .	Scituate.

NEW YORK.

HORATIO SEYMOUR,	. . . . .	Utica.
GEORGE G. COOPER,	. . . . .	New York City.
ROBERT B. ROOSEVELT,	. . . . .	New York City.

* The necessary absence of Mr. Lyman in Europe has deprived the State of his valuable services during the past year.

[B.]

BUCKSPORT, ME., Nov 30, 1872.

E. A. BRACKETT AND THOMAS TALBOT, *Commissioners on Inland Fisheries,
Commonwealth of Massachusetts.*

GENTLEMEN :—In compliance with your request I have the honor to give you the following brief account of the operations in collecting salmon spawn at the establishments under my charge on the Penobscot River during the seasons of 1871 and 1872 :—

Though the Penobscot River (at present the best salmon river in New England) yields only some five or six thousand salmon yearly, and is therefore, so far as the number of fish is concerned, a much less favorable site for the collection of spawn than many rivers in Canada, I was led to attempt operations in the former by a consideration of the difficulty and uncertainty attending enterprises of the kind in the latter, and by the extreme high price demanded at the only regular establishment in North America where this commodity was offered for sale. Massachusetts and other New England States have, on several occasions, obtained salmon eggs in small quantities by sending agents to the rivers of New Brunswick, at the spawning season. Other lots have been furnished by private parties operating in the same rivers, at prices ranging from fifteen dollars per thousand upward. I think, however, I am justified by the facts in saying that the number of good eggs thus obtained was entirely inadequate to the needs of the public waters in which they were placed. At the Canadian Government's establishment at Newcastle, Province of Ontario, salmon eggs have for several years past been offered for sale at \$40 (gold) per thousand, and a few thousands have been purchased by some of the States at that rate. The eggs obtained from these various sources were barely sufficient to make a beginning of the work of stocking exhausted rivers with salmon. A more plentiful supply, at prices we could afford to pay, was the most pressing need of

salmon culture in New England, and its lack threatened to put off for many years the realization of the hopes of the communities that had undertaken this branch of public improvement. It is therefore with great pleasure that I am able to assure you that we have succeeded in opening in the Penobscot River a source from which an abundant supply of salmon eggs may be obtained at a small cost. The number of eggs collected this season is several fold more than has ever been collected in any one year by all the establishments in North America, and the cost is already reduced to a small fraction of the price charged in Canada.

OPERATIONS IN 1871.

In June and July, 1871, I bought one hundred and eleven live salmon and confined the greater part of them in fresh water, at Craig's Pond brook in Orland. A series of misfortunes which need not be detailed here, and which we have learned to avoid, reduced the number of fish to eighteen, from which we obtained about 75,000 eggs. Only four per cent. of these failed by lack of fecundation, the loss from other causes was not much greater, and near 70,000 good eggs were distributed in December, to the subscribers to the fund, namely, the Commissioners of Fisheries of Maine, Massachusetts and Connecticut, and Wm. Clift, at a cost, up to the time of distribution, of \$18.09 per thousand.

The most important result of the season's work was the addition made to our stock of knowledge on the subject. Some important questions as to the natural history of salmon were answered, and all doubt was removed as to the entire practicability of taking salmon from the salt water of Penobscot Bay, transferring them to fresh-water ponds or streams and there confining them in a small space until the breeding season, without at all interfering with the normal action of their reproductive organs.

Though, owing to the extraordinary mortality among the adult salmon purchased, neither was the number of eggs so large nor the cost so small as had been anticipated, yet the result was highly encouraging, and the same parties, joined by the United States Commissioner of Fish and Fisheries, and by the Commissioners of Rhode Island, undertook for the

season of 1872, the collection of salmon eggs in substantially the same manner, but on a larger scale, at Bucksport.

OPERATIONS IN 1872.

Great Pond, in Bucksport, situated one mile from the Penobscot River, was selected as the place for confining the salmon. It covers about one hundred acres, has dark-colored water and a muddy bottom, and discharges by a small stream into the Penobscot. During the salmon fishing season,—May, June and July,—over six hundred salmon were bought and put into this pond. They were all caught in weirs (i.e., pounds) within five miles of Bucksport, were placed in boats prepared for the purpose and towed to the landing in that village, where they were transferred to wooden tanks filled with water, and carted to the pond. Some of them were injured on the journey and died. Near a hundred were lost from this cause.

The salmon were allowed the range of the whole pond during the summer, with the expectation that as the breeding season approached we should be able by the means of sweep-nets and pounds, to gather the greater part of them near the outlet, so that when ready to spawn they would readily find the brook and run into it, and if some escaped, they would for the most part run up the small brooks entering the pond and there be easily caught.

These arrangements were so far successful that over three hundred of the fish were caught and manipulated between October 28th and November 16th. The large majority of these were females, and the number of eggs taken from them reaches the large sum of 1,500,000. The success in fecundation seems to be even better than in 1871. Those taken on and before November 5th, amounting to 1,050,000, have been critically examined and the proportion of fecund eggs is over ninety-eight per cent. This is inclusive of several lots devoted to experiments in fecundation; if these are excluded the fecundated eggs are ninety-nine per cent.

These eggs are deposited for partial incubation in a hatching-house, seventy feet long and twenty-eight feet wide, furnished with wooden troughs, and trays of varnished wire-cloth such as have proved so successful with you. The water

used comes from the brook and is very cold, having averaged for the last week in November, 36° F. The development of the eggs will therefore be slow, and probably none of them will be distributed to the subscribers before January 15th.

Besides the hatching-house, it was necessary to erect a small building for dry uses. These buildings, though plain and cheap, will be good for many years occupancy. The same is true of the boats and other apparatus for transporting salmon, and there was a considerable expenditure for nets, &c., which will be of service in future. These expenditures for permanent purposes have swollen the total outlay for the year to a much larger sum than will hereafter suffice for the collection of an equal number of eggs, yet if no serious accident befalls, the cost of the spawn to be distributed to the subscribers this year will not exceed \$5.00 per thousand, one-ninth the Canadian price. Should the operations be continued in the same place, I anticipate a further reduction in cost, and it is not improbable that finally it may be as low as the price of salmon eggs collected in the Rhine, which is about \$2.00 per thousand at the establishments in Germany.

In future, should the salmon fishing in the Penobscot continue good, so that the requisite number of adult salmon can be collected, the operations at Bucksport can be enlarged, and since the Commissioners of Fisheries of this State are taking vigorous measures, by enforcing the laws, building fishways and hatching young from the eggs obtained here, to promote that end, I have no doubt that those interested in this establishment will be able in the future to obtain through it a quantity of salmon spawn sufficient to insure the speedy restoration of the species to their exhausted rivers.

Respectfully yours,

CHAS. G. ATKINS.

[C.]

NATIONAL SAILORS' HOME, QUINCY, MASS., Nov. 18, 1872.

E. A. BRACKETT, ESQ.,

DEAR SIR :—I was much interested by reading the "Report of the Commissioners of Inland Fisheries" for last year, but observed nothing in it in relation to the protection of lobsters. This valuable crustacean has been pretty closely fished in Massachusetts waters for the last ten years, and the value of the catch is decreasing yearly and rapidly. The lobster fishing of Maine is of large proportions, and affords employment to many persons in catching and preparing them for market, the canned product finding its way all over the United States, and the fresh lobster as far as it can be sent by rail.

Massachusetts, having no law for protection of lobsters, is growing poorer in this respect all the time, and the demand for them is so great that large numbers are sold of an average weight of less than one pound each, and also many spawn lobsters. To secure the protection this fishery seems to demand, I would suggest the passage of an Act for the prohibition of the taking of spawn lobsters, and also for the taking or selling of any lobster under two pounds weight.

The temporary inconvenience to the lobster fishermen would, I believe, be amply compensated by the increased number of lobsters taken in the second and following years after the passage of such an Act as I refer to.

I am, sir, respectfully your obedient servant,

W. L. FAXON.

[D.]

PLANS OF FISHWAYS.

IMPROVED FOSTER FISHWAY.

PLATE I. FIG. 1. This figure shows it in elevation with the head set *into* the face of the dam and the foot resting in the river below. It will be observed that the floor is a uniformly inclined plane without depressions to form pools or resting places. The floor of a fishway should be as *smooth* as possible; a still pool or a large eddy is a temptation to the fish to loiter or to turn back, and the old idea of making such pools is an error.

FIG. 2. Shows the same in plan with the cross bulkheads A A, and the girders which brace the plank sides. The upper entrance is at B and the lower one at C.

FIG. 3. Shows a "return" fishway; that is, one which doubles on itself and comes back toward its starting line.

FIG. 4. Shows the manner of arranging the bulkheads at the "return," so as to have a uniform flow.

FIGS. 5 and 6. Are drawings somewhat enlarged, showing details of construction.

FIG. 7. Shows the "slide" or gate by which the volume of water is regulated at the head of the fishway. (B.) (See also B, fig. 1.)

FIG. 8. Shows a section of the slide or gate (S), which should never play up and down, but always sideways. The fishway, when not over a hundred feet long, may fall 1:10; when longer than that, it may fall 1:12 to 1:15. The width of the openings through the bulkheads should be about one-third the width of the fishway. The width of the latter is usually $2\frac{1}{2}$ to 3 feet, and the width of the opening is therefore 10 to 12 inches.

PLATE II. FIG. 1. Working plan of fishway drawn to a scale, and the dimensions figured. This fishway extends to the dam E, with gateways on the sides and ends, marked A B C D, to regulate the supply of water according to the level of the pond. (See fig. 2.) At high-water the gate A would be used; as the water falls, A is closed and B is opened, and so on, until D is needed. The fishway inclines one foot in ten, and may extend any distance desired through the dam.

FIG. 3. Is a section of the dam through the gate, A being the gate and B the opening in the dam.

FIG. 4. Elevation of the gate showing the lever C which is used to open and shut the gate.

FIG. 5. Section of fishway built against the dam A in the usual manner when the water is generally at the same level.

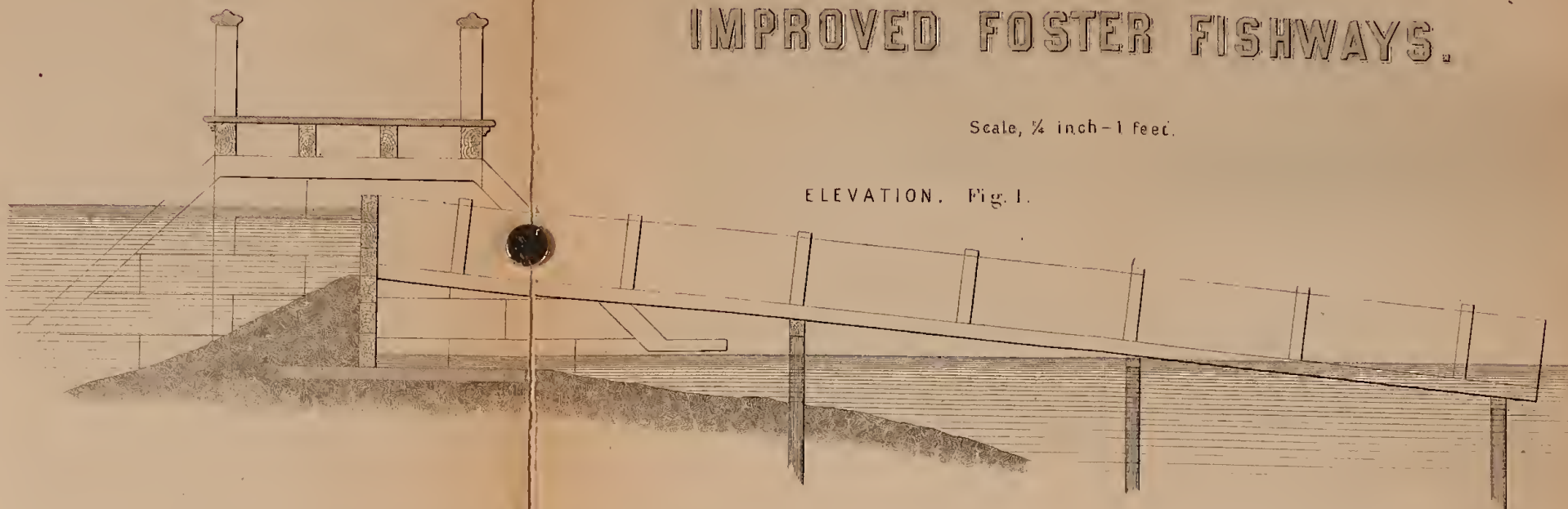
FIGS. 6 and 7. Show the manner of constructing a turn at right-angles.

FIG. 8. Shows the manner of constructing a turn in a diagonal direction.

IMPROVED FOSTER FISHWAYS.

Scale, $\frac{1}{4}$ inch = 1 foot.

ELEVATION, Fig. 1.



ABUTMENT.

PLAN, Fig. 2.

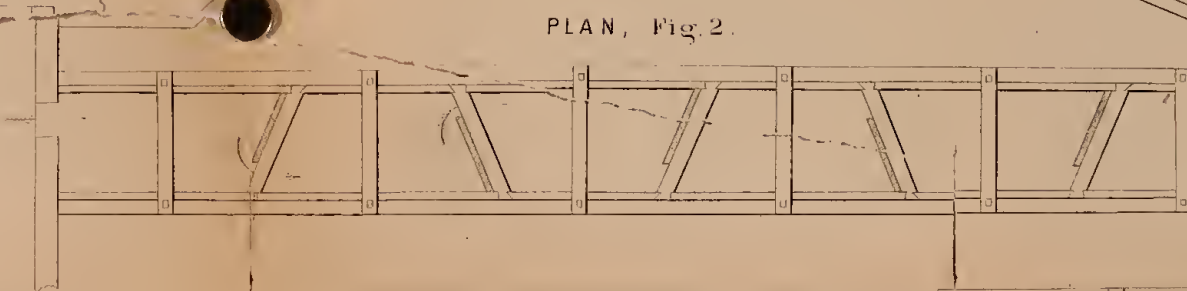


Fig. 3.



Fig. 4.

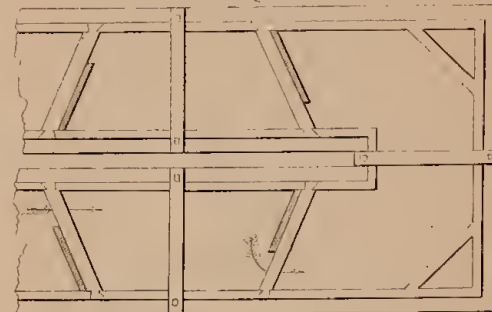
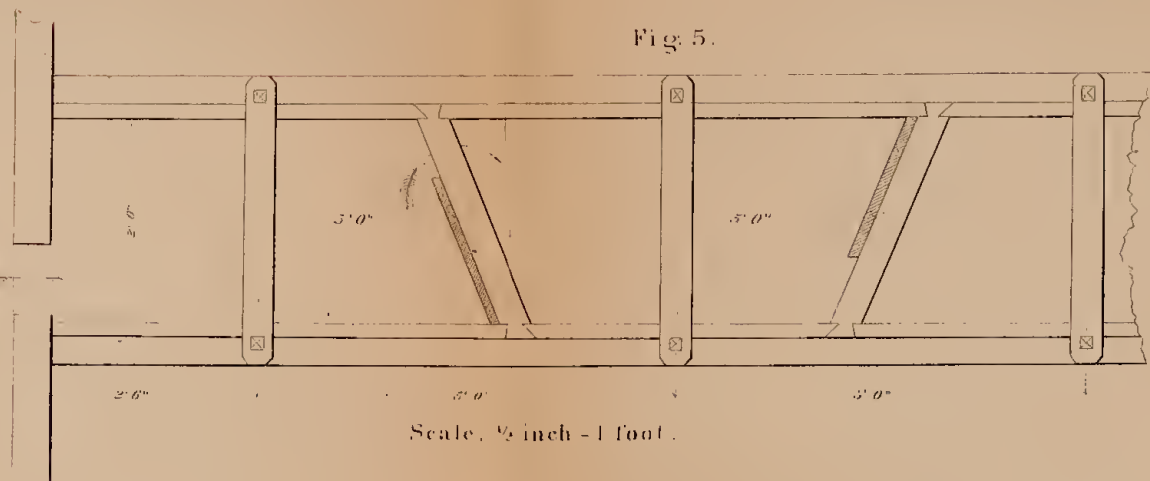
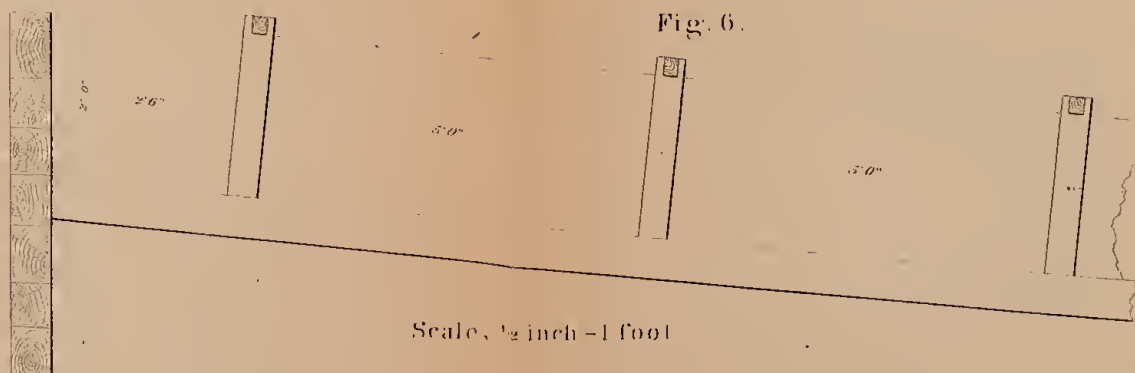


Fig. 5.



Scale, $\frac{1}{2}$ inch = 1 foot.

Fig. 6.

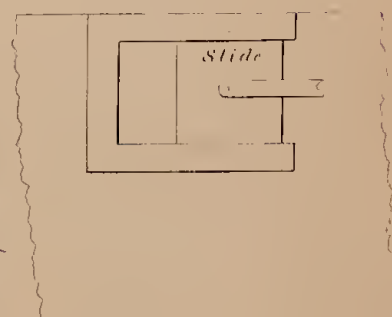


Scale, $\frac{1}{2}$ inch = 1 foot.

Fig. 7.



Fig. 8.



Scale, $\frac{1}{2}$ inch = 1 foot.



BRACKETT'S FISHWAY.

ABUTMENT.

Scale, 1/4 inch = 1 foot

Fig. 1. PLAN.

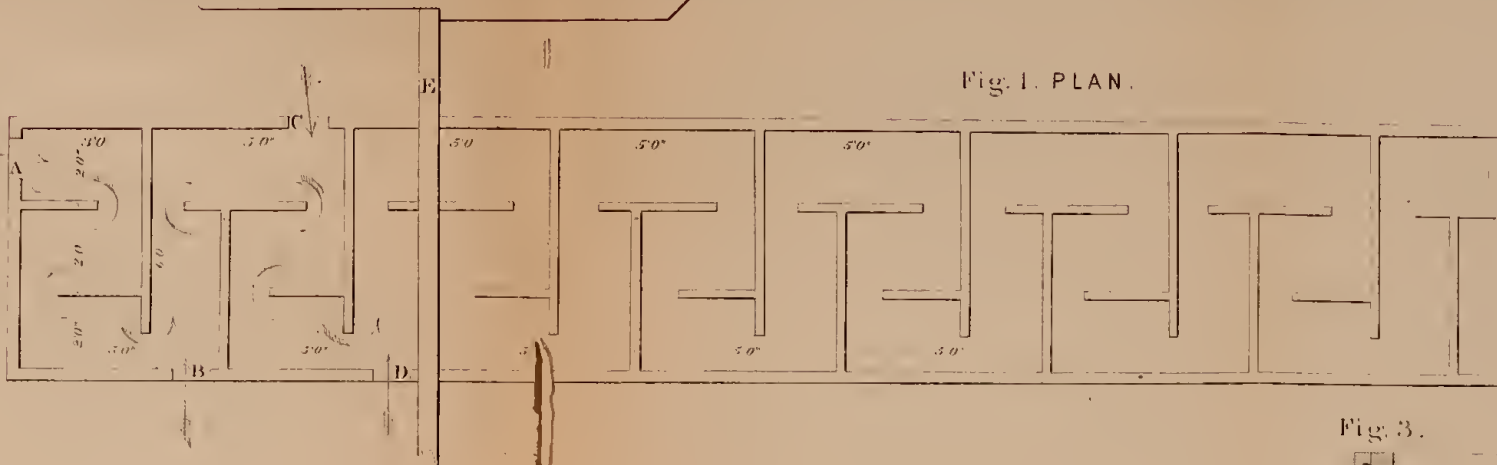


Fig. 2. ELEVATION.

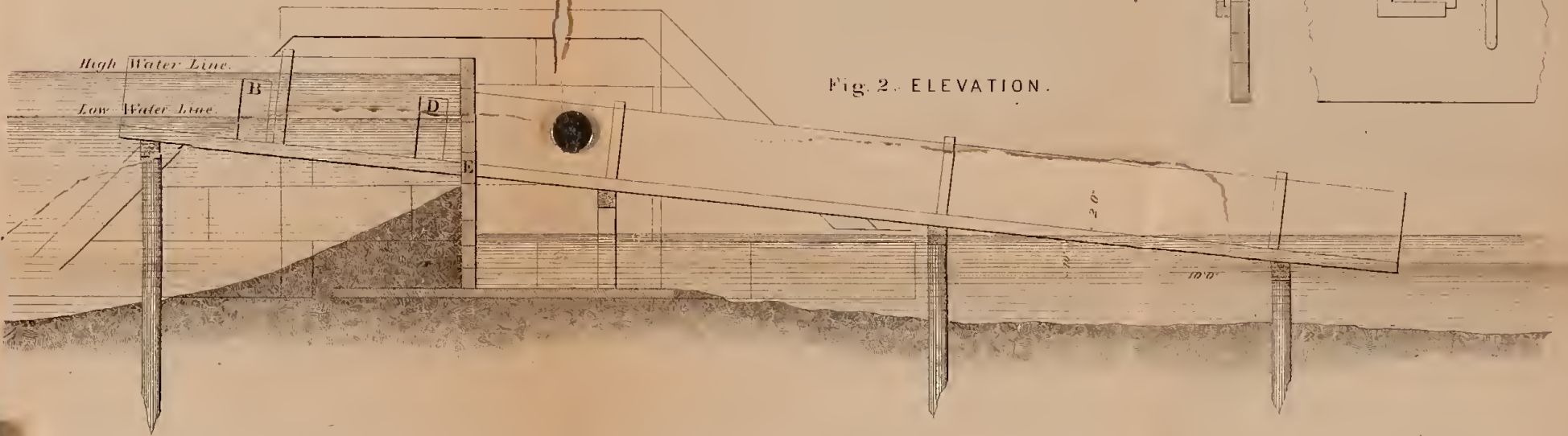


Fig. 3.



Fig. 4.



Fig. 5.

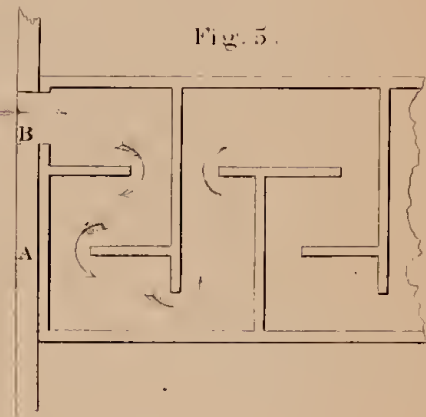


Fig. 6.

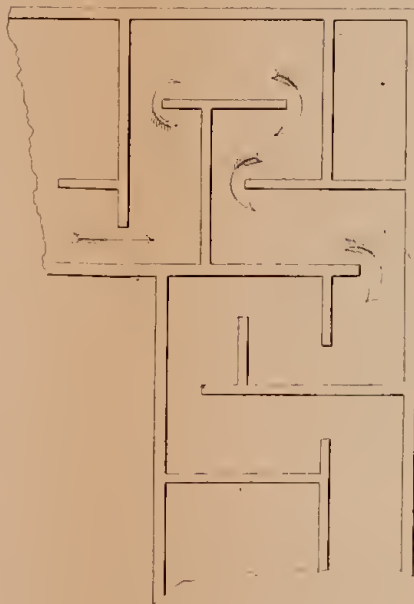


Fig. 7.

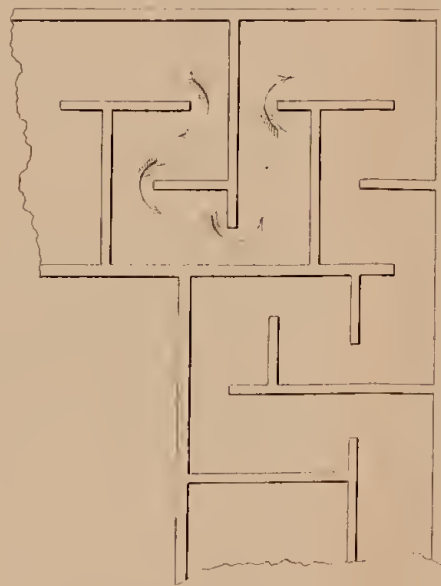
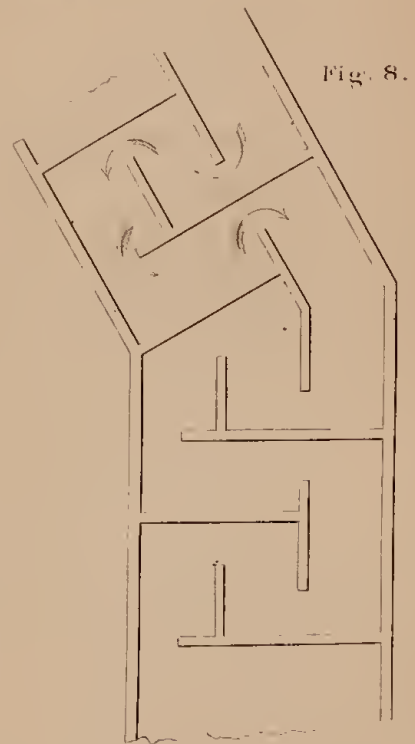


Fig. 8.





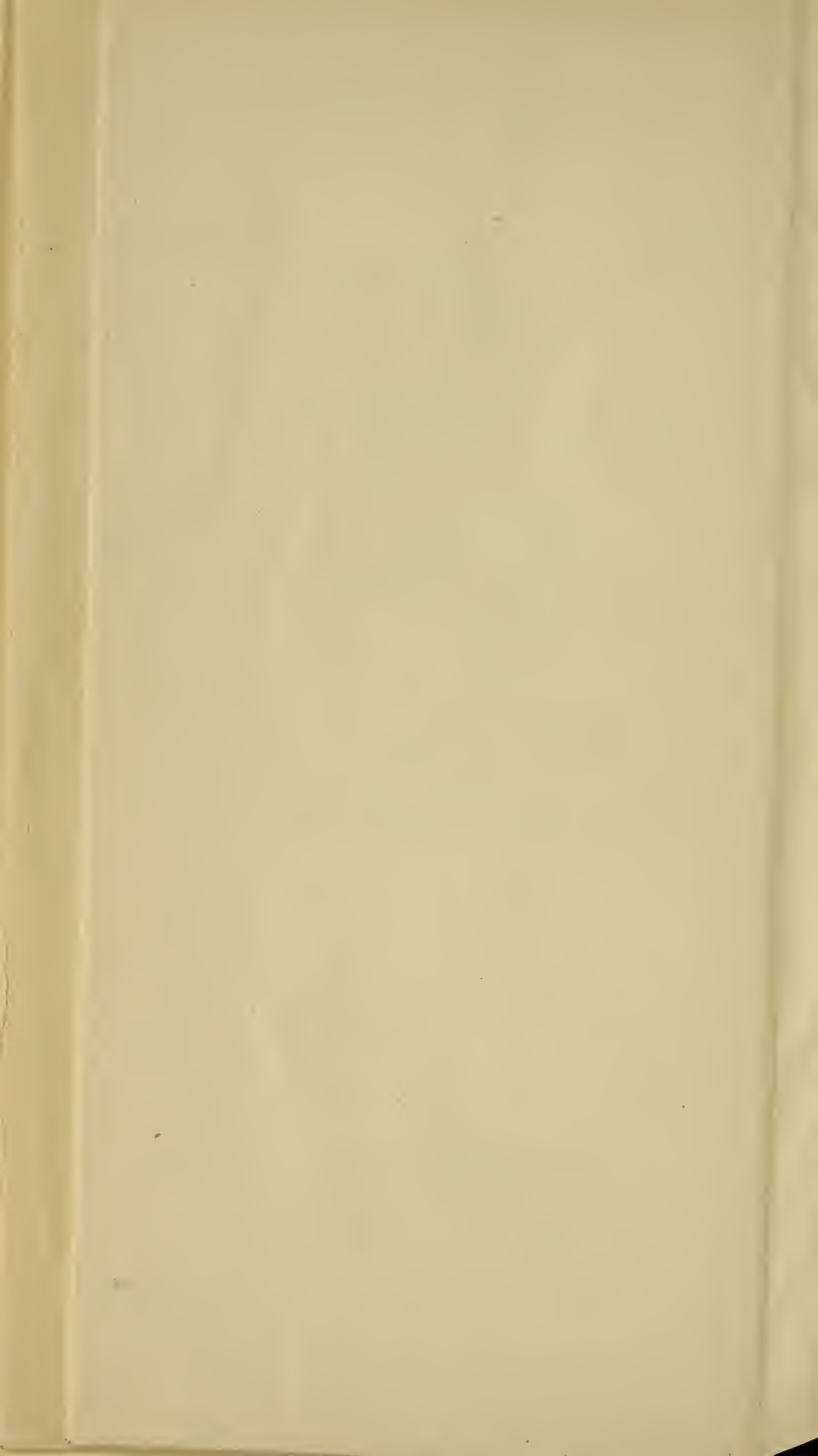


PLATE III. A.—The main pond,—the-clear part from 4 to 8 feet deep,—the dotted part covered with trees and shrubs. This pond contains about 16 acres.

B. C. D.—Spawning-beds.

E.—Small pond for young trout.

F.—Hatching-house.

G.—Spring for supplying hatching-house.

H. L.—Pools for breeding-fish, with spawning-race.

J.—Pool for fresh-water salmon, with spawning-race.

1, 2, 3, 4, 5, 6.—Ponds for rearing young fish.

[F.]

ACRES OF LAND COVERED WITH WATER.

Abington,	674	Cambridge,	273
Acton,	450	Canton,	548
Acushnet,	566	Carlisle,	87
Adams,	114	Carver,	1,000
Agawam,	239	Carlemont,	695
Alford,	15	Charlestown,	258
Amesbury,	575	Charlton,	830
Amherst,	169	Chatham,	5,962
Andover,	911	Chelmsford,	414
Arlington,	228	Chelsea,	5
Ashburnham,	1,800	Cheshire,	100
Ashby,	200	Chester,	440
Ashfield,	69	Chesterfield,	427
Ashland,	143	Chicopee,	508
Athol,	453	Chilmark,	876
Attleborough,	900	Clarksburg,	87
Auburn,	194	Clinton,	289
Ayer,	-	Cohasset,	300
Barnstable,	8,140	Colrain,	161
Barre,	409	Concord,	225
Becket,	1,180	Conway,	239
Bedford,	79	Cummingham,	129
Belchertown,	1,000	Dalton,	100
Bellingham,	265	Dana,	660
Belmont,	175	Danvers,	-
Berkley,	6	Dartmouth,	513
Berlin,	107	Dedham,	450
Bernardston,	56	Deerfield,	848
Beverly,	300	Dennis,	979
Billerica,	425	Dighton,	183
Blackstone,	139	Douglas,	900
Blandford,	735	Dover,	25
Bolton,	80	Dracut,	575
Dorchester,	320	Dudley,	780
Boston,	693	Dunstable,	160
Roxbury,	58	Duxbury,	5,847
Boxborough,	96	E. Bridgewater,	250
Boxford,	400	Eastham,	800
Boylston,	627	Easthampton,	324
Bradford,	80	Easton,	370
Braintree,	470	Edgartown,	2,910
Brewster,	1,400	Egremont,	285
Bridgewater,	850	Enfield,	160
Brighton,	100	Erving,	64
Brimfield,	525	Essex,	2,000
Brookfield,	1,012	Everett,	-
Brookline,	210	Fairhaven,	10
Buckland,	339	Fall River,	916
Burlington,	22		

Falmouth,	4,838	Lenox,	60
Fitchburg,	320	Leominster,	555
Florida,	162	Leverett,	125
Foxborough,	600	Lexington,	15
Framingham,	715	Leyden,	119
Franklin,	213	Lincoln,	300
Freetown,	1,505	Littleton,	469
Gardner,	474	Longmeadow,	212
Gay Head,	—	Lowell,	200
Georgetown,	131	Ludlow,	250
Gill,	46	Lunenburg,	1,031
Gloucester,	102	Lynn,	950
Goshen,	678	Lynnfield,	112
Gosnold,	—	Malden,	317
Grafton,	408	Manchester,	217
Granby,	200	Mansfield,	161
Granville,	95	Marblehead,	2
Gt. Barrington,	718	Marion,	30
Greenfield,	180	Marlborough,	851
Greenwich,	450	Marshfield,	490
Groton,	1,200	Mashpee,	—
Groveland,	137	Mattapoisett,	62
Hadley,	450	Maynard,	—
Halifax,	731	Medfield,	100
Hamilton,	346	Medford,	300
Hancock,	26	Medway,	195
Hanover,	100	Melrose,	44
Hanson,	365	Mendon,	128
Hardwick,	355	Methuen,	695
Harvard,	505	Middleborough,	1,755
Harwich,	1,974	Middlefield,	100
Hatfield,	307	Middleton,	—
Haverhill,	1,107	Milford,	284
Hawley,	500	Millbury,	305
Heath,	100	Milton,	216
Hingham,	217	Monroe,	71
Hinsdale,	200	Monson,	59
Holden,	786	Montague,	941
Holland,	170	Monterey,	610
Holliston,	264	Montgomery,	150
Holyoke,	450	Mt. Washington,	100
Hopkinton,	1,081	Nahant,	—
Hubbardston,	420	Nantucket,	1,050
Hudson,	—	Natick,	750
Hull,	6	Needham,	409
Huntington,	900	New Ashford,	—
Hyde Park,	—	New Bedford,	80
Ipswich,	3,579	New Braintree,	37
Kingston,	700	New Marlborough,	400
Lakeville,	2,700	New Salem,	607
Lancaster,	725	Newbury,	2,712
Lanesborough,	300	Newburyport,	871
Lawrence,	339	Newton,	176
Lee,	1,200	Norfolk,	—
Leicester,	639	North Andover,	799
		N. Bridgewater,	1,000
		N. Brookfield,	526

North Reading,	387	Shutesbury,	257
Northampton,	4,500	Somerset,	10
Northborough,	552	Somerville,	125
Northbridge,	525	South Hadley,	109
Northfield,	500	South Scituate,	250
Norton,	1,372	Southampton,	100
Oakham,	256	Southborough,	46
Orange,	1,040	Southbridge,	-
Orleans,	2,748	Southwick,	700
Otis,	1,666	Spencer,	486
Oxford,	849	Springfield,	471
Palmer,	1,200	Sterling,	500
Paxton,	256	Stockbridge,	441
Peabody,	170	Stoneham,	396
Pelham,	50	Stoughton,	118
Penbroke,	1,070	Stow,	485
Pepperell,	268	Sturbridge,	1,050
Peru,	60	Sudbury,	225
Petersham,	196	Sunderland,	30
Phillipston,	479	Sutton,	95
Pittsfield,	1,100	Swampscott,	-
Plainfield,	156	Swansey,	150
Plymouth,	3,065	Taunton,	2,000
Plympton,	495	Templeton,	497
Prescott,	322	Tewksbury,	15
Princeton,	380	Tisbury,	3,725
Provincetown,	221	Tolland,	-
Quincy,	822	Topsfield,	92
Randolph,	154	Townsend,	320
Raynham,	270	Truro,	1,262
Reading,	-	Tyngsborough,	915
Rehoboth,	391	Tyringham,	48
Revere,	-	Upton,	150
Richmond,	250	Uxbridge,	395
Rochester,	1,175	Wakefield,	502
Rockport,	71	Wales,	142
Rowe,	190	Walpole,	180
Rowley,	-	Waltham,	475
Royalston,	1,121	Ware,	650
Russell,	370	Wareham,	2,423
Rutland,	350	Warren,	136
Salem,	150	Warwick,	1,000
Salisbury,	304	Washington,	291
Sandisfield,	340	Watertown,	104
Sandwich,	1,600	Wayland,	450
Saugus,	150	Webster,	1,728
Savoy,	189	Wellfleet,	4,866
Scituate,	1,000	Wendell,	240
Seekonk,	63	Wenham,	400
Sharon,	92	West Boylston,	110
Sheffield,	1,180	W. Bridgewater,	175
Shelburne,	124	West Brookfield,	362
Sherborn,	208	West Newbury,	20
Shirley,	198	West Roxbury,	120
Shrewsbury,	710	West Springfield,	7
		W. Stockbridge,	288

Westborough,	250	Wilmington,	—
Westfield,	725	Winchendon,	50
Westford,	500	Winchester,	110
Westhampton,	7	Windsor,	100
Westminister,	1,630	Winthrop,	2
Weston,	80	Woburn,	203
Westport,	4,000	Worcester,	644
Weymouth,	650	Worthington,	40
Whately,	70	Wrentham,	1,346
Wilbraham,	126	Yarmouth,	3,100
Williamsburg,	116		
Williamstown,	247	Total,	196,342

EIGHTH ANNUAL REPORT

OF THE

COMMISSIONERS

ON

INLAND FISHERIES,

FOR THE

YEAR ENDING JANUARY 1, 1874.

BOSTON:

WRIGHT & POTTER, STATE PRINTERS,
CORNER OF MILK AND FEDERAL STREETS.

1874.

LP

Commonwealth of Massachusetts.

EXECUTIVE DEPARTMENT, BOSTON, January 15, 1874.

To the House of Representatives:

I have the honor herewith to transmit for the use of the General Court, the Annual Reports for 1873, of the Surgeon-General of the Commonwealth, the Commissioners of Inland Fisheries, and the Board of Police Commissioners.

W. B. WASHBURN.

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Commonwealth of Massachusetts.

To His Excellency the Governor and Honorable Council.

The Commissioners on Inland Fisheries beg leave to present their Eighth Annual Report.

The case of the Commonwealth *vs.* Holyoke Water Power Company was decided by the supreme court at Washington last February in favor of the State.

As soon as the water was low enough, surveys and plan of fishway for this dam were made and the work completed, with the exception of some small details, by the last of October. The form adopted by a unanimous vote of the Commissioners of the States interested, was that figured in plate 2 of last year's report. On the nineteenth of November, the fishway was opened for public inspection. There were present on that occasion the governor and lieutenant-governor of this State, the governor, lieutenant-governor and staff of Connecticut, New England Commissioners on Fisheries, and other gentlemen interested in fish culture.

It is due the Holyoke Water Power Company to say, that they have fully coöperated with your Commissioners, and the plans and details of the work, so far as finished, have been faithfully carried out.

The fishway at Turner's Falls will probably be built next summer, when it is hoped that all obstacles to the passage of fish up this river will have been removed. The duties of Massachusetts toward her sister States do not, however, stop here. The dam at Turner's Falls entirely destroyed the salmon, and that at Holyoke prevented the passage of

shad above that point. Suitable laws should be passed to protect these fishways, wardens appointed to see that the laws are enforced, and every reasonable effort made to restore to Vermont and New Hampshire what these dams have deprived them of.

In this interest the Commissioners of the four States interested voted, at their last meeting, to deposit all the young salmon, hatched by them during the coming year, in the headwaters of the Connecticut.

Many millions of young shad will be carried, next summer, above Turner's Falls.

ALEWIFE (*Alosa Tyrrannus*).

In the last report, attention was called to the advantage of cultivating this fish, and the marked influence which such culture would have on the bay and shore fisheries. In the Appendix will be found a letter on this subject, addressed to the Commissioners of Maine, from Prof. Spencer F. Baird, United States commissioner.

Mr. Baird has spent several summers on the New England coast, studying the habits of fish. The letter is valuable as containing conclusions derived from the most extended and careful investigations ever made on fish and their food.

The constant applications made to the Commissioners for aid and advice in constructing fishways to enable these fish to reach their spawning grounds, show that many towns are beginning to understand their value. No fish enters our waters that can be so easily increased, and no other food can be grown at so little expense. In flavor they are not inferior to the shad, the only objection being the abundance of small bones. When properly cured, they bring a good price in the market. Every river and stream in the State where they can be cultivated should be open to them, and where fishways cannot be built, they should be dipped over. We have never yet seen a dam where it was not easier and cheaper to put in a small fishway than to attempt to get them over in any other way.

The alewife spawns principally in June; the eggs are about as large as a small pin's head and perfectly transparent, adhering so strongly to whatever they come in contact with,

that when deposited, they cannot be removed without being destroyed; they are from seventy to seventy-four hours in hatching, and the young fish, for the first few days of its existence, is so small and transparent that it is with difficulty seen by the naked eye.

SHAD (*Alosa Præstabilis*).

Shad-hatching on the Merrimac was continued during the past season at North Andover, under the care of Mr. A. C. Hardy. Notwithstanding the unusual low temperature of the water, occasioned by the late melting of the snow, at the head-waters of the river, and the constant depredations of the fishermen below, it will be seen by the annexed report that there was an increase of fish and double the amount of spawn taken than in any previous year.

DATE.	Shad taken.	Males.	Females.	Alr at 6 A. M.	Water at 6 A. M.	Weather.	No. of Fish taken at each Sweep.	Spawn taken.	Time of Hauling Seine.
June 1,	70	55	15	58	64	Clear, .	55, 15, . . .	100,000	8, 9.30, P.M.
2,	186	150	36	50	62	Clear, .	40, 22, 72, 48, . . .	150,000	2.30, 4.30, 8, 10.30, P.M.
3,	100	83	17	50	63	Cloudy, .	22, 28, 23, 18, 9, . . .	25,000	4, 6, 8, 9.30, 10, P.M.
4,	105	80	25	60	64	Cloudy, .	10, 36, 38, 16, 5, . . .	50,000	5, 8, 9, 10, 11, P.M.
5,	119	85	34	53	64	Clear, .	21, 38, 24, 16, . . .	75,000	5.30, 7.30, 9, 10.30, 11.30, P.M.
6,	97	65	32	58	65	Cloudy, .	13, 15, 30, 24, 15, . . .	175,000	5.30, 7.30, 9, 10.30, 11.30, P.M.
7,	88	61	27	60	64	Raining, .	19, 7, 28, 27, 9, . . .	100,000	5.30, 8, 9.30, 10.30, 12, P.M.
8,	90	50	40	51	64	Clear, .	19, 21, 20, 16, . . .	1,215,000	8, 9.30, 10.30, 11.30, P.M.
9,	79	49	30	53	65	Clear, .	4, 26, 19, 16, 8, 5, . . .	100,000	6.30, 8, 9, 10.30, 11.30, 12.30, P.M.
10,	108	75	33	60	66	Clear, .	19, 20, 14, 27, 15, 13, . . .	200,000	8, 9, 10, 11, 12, 1, P.M.
11,	64	46	18	60	65	Clear, .	22, 14, 10, 10, 6, . . .	100,000	8, 9, 10.30, 12, 1, P.M.
12,	66	39	27	56	65	Clear, .	25, 12, 21, 8, . . .	250,000	8, 9.30, 11, 12, P.M.
13,	72	39	33	50	64	Clear, .	24, 17, 12, 11, . . .	300,000	8, 9.30, 10.30, 11.30, P.M.
14,	98	80	18	60	66	Wet, .	12, 11, 35, 25, 19, . . .	50,000	6, 7, 8.30, 10, 11.30, P.M.

June 15,	48	36	12	62	68	Clear,	.	18, 10, 11, 9,	.	75,000	8, 9, 10.30, 11.30, P.M.
16,	85	78	7	70	66	Showers,	.	52, 11, 13, 9,	.	100,000	8, 10, 11, 12.30, P.M.
17,	62	47	15	48	66	Clear,	.	37, 13, 9, 3,	.	125,000	8, 9.30, 11, 1, P.M.
18,	68	48		62	66	Clear,	.	37, 17, 8, 6,	.	180,000	8, 9.30, 11, 12, P.M.
19,	24	16	8	70	66	Clear,	.	16, 4, 4,	.	150,000	8.30, 10, 12, P.M.
20,	54	32	22	70	67	Clear,	.	29, 17, 8,	.	350,000	8.30, 10, 11.30, P.M.
21,	40	25	15	53	60	Clear,	.	12, 16, 8, 4,	.	100,000	8.30, 9.30, 10.30, 11.30, P.M.
22,	25	17	8	56	62	Clear,	.	9, 10, 6,	.	125,000	3.30, A.M., 9, 11, P.M.
23,	38	23	15	52	65	Clear,	.	4, 20, 10, 4,	.	200,000	3.30, A.M., 8.30, 10, 11.30, P.M.
24,	28	19	9	55	64	Clear,	.	15, 9, 4,	.	750,000	8.30, 10, 12, P.M.
25,	21	10	11	60	65	Clear,	.	12, 6, 3,	.	100,000	8.30, 10, 11.30, P.M.
26,	22	10	12	60	68	Clear,	.	11, 1, 3, 2,	.	150,000	8, 9.30, 11, 12, P.M.
27,	23	11	12	70	66	Clear,	.	9, 7, 4, 3,	.	150,000	8, 9.30, 11, 12.30, P.M.
28,	48	19	29	70	67	Cloudy,	.	26, 14, 5, 3,	.	500,000	8, 9.30, 11, 12.30, P.M.
29,	22	12	10	77	68	Clear,	.	12, 7, 3,	.	500,000	9, 10.30, 1, P.M.
30,	27	19	8	70	68	Clear,	.	18, 6, 3,	.	125,000	8, 10, 12, P.M.

DATE.	Shad taken.	Males.	Females.	Air at 6 P. M.	Water at 6 P. M.	Weather.	No. of Fish taken at each Sweep.	Spawn taken.	Time of Hauling Seine.
July 1,	32	16	16	70	68	Showers, .	18, 10, 4, . . .	400,000	8.30, 10, 12, P.M.
2,	24	13	11	70	67	Clear, .	9, 10, 5, . . .	100,000	8.30, 10, 12, P.M.
3,	59	42	17	70	68	Showers, .	26, 25, 8, . . .	300,000	9, 10.30, 12, P.M.
4,	31	19	12	70	72	Showers, .	23, 7, 1, . . .	200,000	8.30, 10.30, 12.30, P.M.
5,	63	36	27	67	72	Clear, .	28, 27, 8, . . .	300,000	8.30, 10, 12, P.M.
6,	30	21	9	52	70	Clear, .	13, 10, 7, . . .	50,000	8.30, 10, 11.30, P.M.
7,	51	28	23	58	72	Clear, .	24, 19, 8, . . .	500,000	8.30, 10, 11.30, P.M.
8,	38	22	16	68	72	Clear, .	16, 14, 8, . . .	200,000	8.30, 10, 11.30, P.M.
9,	12	5	7	65	71	Clear, .	8, 4, . . .	50,000	8.30, 10, 11.30, P.M.
10,	43	26	17	65	68	Clear, .	23, 13, 7, . . .	300,000	8.30, 10, 11.30, P.M.
11,	22	9	13	60	71	Showers, .	11, 8, 3, . . .	50,000	8.30, 10, 11.30, P.M.
12,	24	13	11	65	71	Clear, .	13, 6, 5, . . .	200,000	8.30, 10, 11.30, P.M.
13,	15	9	6	67	72	Clear, .	10, 5, . . .	50,000	8.30, 10, P.M.
14,	21	7	14	70	73	Clear, .	8, 9, 4, . . .	200,000	8.30, 10, 11.30, P.M.
15,	14	8	6	63	70	Clear, .	8, 4, 2, . . .	150,000	8.30, 10, 11.30, P.M.

July 16,	24	7	17	64	71	Clear,	.	.	14, 8, 2,	.	.	.	400,000	8.30, 10, 11.30, P.M.
17,	16	5	11	60	70	Storm,	.	.	8, 5, 3,	.	.	.	100,000	8, 9.30, 10.30, P.M.
18,	2	0	2	60	70	Storm,	.	.	2,	.	.	.	—	8.30, P.M.
19,	11	4	7	58	68	Cloudy,	.	.	7, 3, 1,	.	.	.	100,000	8.30, 10, 11.30, P.M.
20,	12	7	5	62	69	Clear,	.	.	6, 4, 2,	.	.	.	75,000	8.30, 10, 11.30, P.M.
21,	21	6	15	52	63	Clear,	.	.	13, 6, 2,	.	.	.	100,000	8, 10, 12, P.M.
22,	14	7	7	60	65	Clear,	.	.	7, 5, 2,	.	.	.	125,000	8, 10, 11.30, P.M.
23,	20	9	11	70	68	Clear,	.	.	10, 7, 3,	.	.	.	150,000	8, 10, 12, P.M.
24,	16	5	11	62	69	Clear,	.	.	8, 5, 3,	.	.	.	150,000	8, 10.30, 12, P.M.
25,	12	5	7	70	69	Clear,	.	.	7, 3, 2,	.	.	.	100,000	8, 10, 11.30, P.M.
26,	13	5	8	70	69	Clear,	.	.	8, 4, 1,	.	.	.	100,000	8, 10, 11, P.M.
27,	13	7	6	69	73	Showers,	.	.	6, 5, 2,	.	.	.	100,000	8, 10, 11.30, P.M.
28,	7	4	3	72	73	Clear,	.	.	4, 2, 1,	.	.	.	75,000	8, 9, 10.30, P.M.
29,	18	4	14	70	73	Clear,	.	.	11, 5, 2,	.	.	.	250,000	8, 9.30, 11, P.M.
30,	11	6	5	68	72	Clear,	.	.	7, 3, 1,	.	.	.	50,000	8, 10, 11, P.M.
31,	8	5	3	70	72	Clear,	.	.	4, 3, 1,	.	.	.	50,000	8, 9, 10.30, P.M.
Aug. 1,	9	6	3	72	74	Clear,	.	.	5, 3, 1,	.	.	.	25,000	8, 9.30, 10.30, P.M.
2,	8	5	3	70	72	Clear,	.	.	5, 2, 1,	.	.	.	25,000	8, 9, 10.30, P.M.

Total catch of fish 2,691; spawn taken 11,595,000. Of these, 3,625,000 were hatched on the Merrimac and turned in above Lowell; 500,000 were carried by Dr. W. W. Fletcher, of the New Hampshire Commission, to the head-waters of the Merrimac in that State; 250,000 were delivered to Mr. E. H. Freeman, of Milton, for the Neponset River; 500,000 were sent to Braintree and hatched in the head-waters of the Monaquot River; the balance were turned into the river at North Andover.

Shad-hatching has been continued on the Connecticut under the direction of the Connecticut Commissioners, Massachusetts furnishing the hatching apparatus, with the following results:—

Table of Shad-Hatching Operations at South Hadley Falls, 1872.

DATE.	NUMBER OF SHAD.	Estimated Number of Ova.	TEMPERATURE OF AIR.			TEMPERATURE OF WATER.		
			6 A. M.	1 P. M.	6 P. M.	6 A. M.	1 P. M.	6 P. M.
June 24, .	{ Males, . Females, .	{ 120 110 }	—	—	—	—	—	—
25, .	{ Males, . Females, .	{ 26 238 }	—	—	—	—	—	—
26, .	{ Males, . Females, .	{ 86 106 }	69	85	80	70	71	72
27, .	{ Males, . Females, .	{ 90 202 }	70	87	82	73	74	78
28, .	{ Males, . Females, .	{ 72 217 }	70	86	80	73	74	75
29, .	{ Males, . Females, .	{ 29 137 }	77	94	85	72	78	75
30, .	. . . . .	—	74	90	86	76	80	79
July 1, .	{ Males, . Females, .	{ 129 234 }	80	84	84	78	82	81
2, .	{ Males, . Females, .	{ 59 198 }	80	87	80	78	81	80

Shad-Hatching Operations at South Hadley Falls—Concluded.

DATE.		NUMBER OF SHAD.	Estimated Number of Ova.	TEMPERATURE OF AIR.			TEMPERATURE OF WATER.		
				6 A. M.	1 P. M.	6 P. M.	6 A. M.	1 P. M.	6 P. M.
July 3,	{ Males, . Females, .	. . . . .	7,488,000	74	91	83	79	83	82
4,	{ Males, . Females, .	. . . . .	4,512,000	72	82	70	83	83	80
5,	{ Males, . Females, .	. . . . .	3,520,000	78	90	76	80	82	82
6,	{ Males, . Females, .	. . . . .	4,230,000	66	86	79	79	83	81
7,	. . . . .	. . . . .	—	71	82	79	79	83	81
8,	{ Males, . Females, .	. . . . .	5,074,000	64	87	80	78	82	81
9,	{ Males, . Females, .	. . . . .	3,650,000	80	84	79	79	81	79
10,	{ Males, . Females, .	. . . . .	960,000	76	84	71	79	81	79
11,	{ Males, . Females, .	. . . . .	50,000	74	94	88	78	80	79

July 12,	Males, { Females,	.	.	.	.	.	.	.	.	28 96	595,000	69	89	69	79	81	76
13,	.	.	.	.	.	.	.	.	.	.	—	66	85	75	75	75	78
14,	.	.	.	.	.	.	.	.	.	.	—	72	82	62	77	77	77
15,	{ Males, Females,	.	.	.	.	.	.	.	.	37 116	3,780,000	72	89	79	78	78	79
16,	{ Males, Females,	.	.	.	.	.	.	.	.	23 66	1,980,000	81	89	79	79	80	80
17,	{ Males, Females,	.	.	.	.	.	.	.	.	12 94	4,230,000	79	94	90	80	82	81
18,	{ Males, Females,	.	.	.	.	.	.	.	.	11 43	2,064,000	80	90	79	80	80	79
19,	.	.	.	.	.	.	.	.	.	.	—	82	90	78	82	82	81
20,	.	.	.	.	.	.	.	.	.	.	—	81	94	86	74	81	82
21,	.	.	.	.	.	.	.	.	.	.	—	76	75	76	79	82	82
22,	.	.	.	.	.	.	.	.	.	.	—	80	85	80	79	80	80
											92,065,000						

The Commissioners of Connecticut, in their report for 1872, state that "the number of shad annually running in the Connecticut River has increased to such an extent that the complaint of the fishermen is no longer of a *paucity* of fish, but the market is so overstocked that they do not obtain a remunerative price for them. The desire and intent of the Commissioners are to make shad so abundant that the poor man with his quarter of a dollar may obtain as good a fish as three or four years since readily commanded a dollar, or twenty-five cents per pound."

There has been quite a falling off in the number of fish taken in that river this year (1873). This may be fairly attributed, first, to overfishing the previous year, and secondly, that in 1869 the Massachusetts Commissioners refused to yield to the exorbitant demand for wages, made by the fishermen at South Hadley, in consequence of which no shad were artificially hatched there that year.

This will be readily understood when it is remembered that it is from three to four years from the time shad are hatched until they return to spawn, and probably, the greater portion do not return till the end of the fourth year. The shad-spawn taken this year has been remarkably good,—that taken in the Merrimac yielding from ninety to ninety-five per cent. of young fish.

SMELTS (*Osmerus viridescens*).

The legislature passed an Act last year, prohibiting the catching or taking of smelts with seine or net of any kind, or in any other manner than by naturally or artificially baited hook and line, in all of the waters of the State except Taunton Great River, Dukes County, Yarmouth, Dennis, Bass River or its tributaries, North and Westport rivers.

If this law is enforced, and the fish protected in their spawning-beds, they will become quite as abundant in a few years as they are at Green Bay, N. H.

Twenty-five years ago the lower waters of the Mystic River were, in winter, crowded with little tents for the protection of persons engaged in fishing. Many, out of employment at that season, made from two to three dollars per day catching smelts, with hook and line, for the market, at six or seven

cents per pound. The seining in the river, and netting them on their spawning-beds soon destroyed all fishing with hook and line, and, in a few years more, seines and nets were abandoned because they did not pay. So completely was the river depleted that the fish committee of the town of Winchester spent several nights in catching fifty-two smelts for the purpose of stocking the river above Mystic dam. For the past five years these fish have been carefully protected in this river and its tributaries; so rapidly have they increased that in the spring the small streams are alive with them crowding up to spawn, and last winter the little tents began to appear on the river below, many persons catching from twelve to fourteen dozen, each, a day.

Seven-eighths of the constant and steady supply of smelts for the Boston market come from Green Bay, near Portsmouth, and are caught with hook and line, the fishermen making from three to five dollars per day. No man would venture upon Green Bay with seine or net unless he believed in baptism without benefit of clergy.

Smelts inhabit the bays and creeks along the coast running up the rivers and streams through April and May to spawn. Earlier in the season they hang about the mouths of these streams drifting up and down with the ebb and flow of the tide and are then easily destroyed with nets.

Seining is a monopoly of the few against the interests of the many, producing a glut to-day and famine to-morrow.

TROUT (*Salmo Fontinalis*).

The taking and hatching of trout-spawn has been so often described in former reports, and is so generally understood, that it requires no repetition here. Quite a number of establishments have been started in this State during the past year, some of them involving the expenditure of many thousands of dollars. The success of this enterprise will depend upon the knowledge and management of the owners. It has been too generally understood that a pond supplied from a spring running two or three square inches of water would yield a large profit. This is a mistake. Persons owning or controlling such springs, or a very small stream of cold water, may grow a good supply of fish for their tables by artificial feed-

ing; but when it is intended to raise them on an extensive scale for the market an entirely different course should be pursued.

The preserve should be a flowed pond of many acres, with deep and shallow water; the grass, bushes and trees should not be removed; roots, brush, rocks, *anything* that will shelter the fish and serve to generate insects should be left in the pond, which should be large enough to supply, naturally, at least half the food the fish may require.

The large pond flowed and owned by D. H. Gilbert and Son of Plymouth, is, with the exception of the spawning-bed at the head, in the right direction. Those who are intending to enter largely into trout-culture would do well to study this, and the natural advantages it secures.

SALMON (*Salmo Salar*).

In the report of 1873 it was stated that the Commissioners of Connecticut, Rhode Island, Maine and Massachusetts, aided by Prof. Baird, United States Commissioner, had united in an arrangement to procure salmon-spawn; that under the care and management of Mr. Charles G. Atkins, formerly Commissioner of Maine, the price had been reduced from forty to nineteen dollars per thousand. Last year it was reduced to five dollars per thousand, and this year a still farther reduction may be expected.

Massachusetts' share was 202,800. The United States Commissioner presented to the State 30,000, making in all 232,800. These were, in January and February, deposited in the state hatching-house, at Winchester, and hatched in March and April.

About 185,000 healthy young fish were thus obtained,—some of the eggs having suffered from defects at the Bucksport establishment which, we understand, have this year been remedied.

As soon as the yolk-sac was absorbed, 165,000 were carried by Dr. Wm. W. Fletcher, Commissioner of New Hampshire, to the headwaters of the Merrimac, at Woodstock and Thornton.

Dr. Fletcher was very successful in transporting them, losing very few fish. In addition to these the Commissioners of

New Hampshire put in 20,000, making 185,000 young salmon turned into the headwaters of the Merrimac in the spring of 1873. About 8,000 were sent to the Cape and the remainder put into the headwaters of the Mystic River. If this supply can be kept up for a few years there can be no question as to the result.

Many rivers in Europe where salmon never before existed or had been destroyed have been thus well stocked.

Mr. Atkins has been more successful this season, having obtained one million of spawn more than last year. In the spring of 1871, seven hundred young salmon, which were hatched in the spring of 1869, were turned into the Mystic River. They had been kept in tanks until they were from five to six inches in length, and many of them showed a strong disposition to migrate to the sea, throwing themselves out of the tanks whenever there was an opening in the cover sufficient for them to get through.

The reports of large fish seen in Mystic Pond, and later in the season in the waters above, led to frequent examinations of the stream. Early in the spring the remains of four salmon ridds were found, two at the foot of the rapids below Whitney's mill, and two in the stream above the mill-pond near Richardson's dam. These fish must have spawned late in the season, for on the twentieth of November no excavations nor heaps of gravel existed in either place.

A year ago last spring a number of young salmon weighing from two to three pounds were taken in Massachusetts Bay, principally with gill-nets used for catching mackerel. We are not aware that any have been so taken during the last season; certainly none have found their way to the market. The fish have probably become too large to be gilled in mackerel-nets. Several were taken with hook and line, last summer, weighing eight and nine pounds, in the bays near Boston. A party from Lowell and Waltham while fishing for squiteague and bass, last July, in Buzzard's Bay, caught a salmon weighing eight pounds.

These facts are mentioned to show that the very few salmon which the Commissioners were able to put in three years ago have begun to report themselves by net and line. The share of spawn for Connecticut and Massachusetts, with what

may be expected from the United States Commissioner will enable the Commissioners of these States to put into the Connecticut, next spring, about 600,000 young salmon.

SACRAMENTO SALMON (*Salmo Quinnat*).

The expedition sent out by the United States Commissioner for the purpose of obtaining the Sacramento salmon, has been attended with good success as will be seen by the following report:—

“The eggs of the Sacramento River salmon, which were obtained this autumn in California by the United States Fish Commission, on the McCloud River, one of the tributaries of the Sacramento, have all been shipped eastward. The plan of Hon. Spencer F. Baird, the head of the Commission, to distribute the eggs among the fish commissioners of the various States, to be hatched under their auspices, has been carried out with most of the shipments. In pursuance of this plan,—

Dr. J. H. Slack, Fish Commissioner for New Jersey,	
has received	350,000
R. G. Pike, Commissioner for Connecticut, has received .	110,000
James Duffy, for Pennsylvania, has received	30,000
George H. Jerome, for Michigan, has received . . .	110,000
Seth Green, for New York, has received	220,000
Charles G. Atkins, for Maine, has received	20,000
E. A. Brackett, for Massachusetts, has received . . .	25,000
F. W. Webber, for New Hampshire, has received . . .	50,000
A. P. Rockwood, Great Salt Lake, Utah, has received .	40,000
Total,	<hr/> 925,000

“The above figures give the estimated number of eggs that arrived alive, as far as heard from. There were some lost, in the various journeys across the continent, but when the eggs were taken in California, a large surplus was provided, to cover this very emergency. The instructions given to Mr. Livingston Stone, who had charge of the enterprise, were to furnish a million eggs; and it will be seen by the above statistics that very nearly this number were delivered alive at their destinations, so that the enterprise, in its results, was an almost entire success.

“The eggs were shipped from California in four lots. The first lot of 250,000, forwarded September 20, arrived all dead but 30,000, owing to the warm weather. The second lot, of 600,000, shipped

September 30, arrived with seventy-five per cent. alive. The third lot, of October 6, containing 250,000, came in excellent condition; and the fourth lot, still later, of 250,000, came the best of all.

“When the first lot arrived, in bad order, the loss was attributed to the manner of packing, and considerable fault was found with it; while the real cause of the misfortune was the warm weather, salmon eggs in transportation requiring a very cold temperature to go safely.

“The improved condition of the second lot, and the fine order in which the third and fourth shipments arrived, proved that it was not the packing of the eggs, but the high temperature, which caused the loss of the first lot.”

The number of spawn presented to this State was 48,000, from which 27,000 young fish were obtained. The eggs are larger, and the young fish, at the age of six weeks, much larger and more active than those of the *Salmo Salar*. Mr. Stone, in his interesting letter, to be found in the Appendix, states that they are not as productive in spawn as the Atlantic salmon. Some compensation for this may be found in their more rapid growth, and greater activity, which enables them more readily to escape their enemies. As a further supply may be expected, it has been decided to put the hatch of this year into two small rivers, where their growth and habits may be more easily studied.

LAND-LOCKED SALMON.

Last August, the Commissioners of Connecticut and Massachusetts examined Sebec Lake and its tributaries, with the view of obtaining the spawn of fresh-water or land-locked salmon. After a careful investigation, it was decided to construct ponds and hatching-house at the mouth of Ship Pond stream, one of the tributaries at the head of the lake. A very liberal lease was obtained from D. F. Leavitt and George W. Weston, for use of dam, and land for ponds and hatching-house; also the riparian rights of sixty acres of land controlling the fisheries on that part of the lake. The lessees agreeing to make any necessary repairs in the dam, not exceeding twenty-five dollars a year; that being the only compensation required by the owners. The lease runs to the United States Commissioner, and the Commissioners of Con-

necticut and Massachusetts, for a term of five years, Professor Baird having joined in the enterprise. Vermont and New Hampshire will also come into the arrangement the coming year. Owing to the difficulty of obtaining labor and material, the work was not completed in time to secure the desired number of breeding-fish, and consequently only about fifty thousand eggs were obtained last fall. It is the design of the Commissioners, as soon as possible, to furnish all the towns in the State, having suitable ponds for land-locked salmon, with a sufficient number of young fish to stock them, the towns either paying for transportation, or sending a proper person to the State hatching-house at Winchester for them.

FISHWAYS.

Of the eighteen fishways planned and ordered during the past year, fifteen have been completed, including the one at Holyoke, and assurance given that the remainder will be built in the spring.

That at Middleborough, on the Nemasket River, over the dam owned by N. B. Sherman, has created considerable excitement among the fishermen of Taunton Great River.

Six years ago, a Foster fishway was built at this place, but like *all* these fishways, built in this State, proved a failure. In 1870, it was altered into what is called an improved Foster fishway. In consequence of the height of the dam, this appears to have given no better satisfaction, the fishermen complaining bitterly, and not without good reason, that it was also a failure. Mr. Sherman appealed to the Commissioners, stating that although he had built these fishways at their orders, and at his own expense, he was nevertheless willing, if anything better could be had, to build another one. Drawings and plans of the new fishway were furnished to him, and last spring, before the fish came up, it was completed. We are informed that all the fish that were fortunate enough to reach this dam went freely over. The last reports were that "all was quiet along" Taunton Great River. Now that the fishermen have a fishway that will take over all the fish that escape their nets, and the still worse traps at Middleborough, we trust that they will see and understand that it is

not sufficient to keep up the stock in the river. They are fishing altogether too much.

There has been quite an increase of fish, during the past season, over the Lawrence fishway.

LEASED PONDS.

Since the passage of chapter 384 of the Acts of 1869, twenty-six great ponds have been leased by the Commissioners for the cultivation of useful fishes. A list of these ponds, with their location, the names of the parties to whom made, and the length of time in each case, is appended to this Report.

It will be seen that four of these leases run to the towns in which the ponds are located. This has been done under authority granted in chapter 195, section 2, of the Acts of 1873. Prior to the passage of this Act, no public notice of application for lease by private parties was required, and complaints had arisen therefrom which it was the purpose of this statute to obviate. Under the rule now adopted by the Commissioners, parties applying for a lease are required to give notice to the town in which the pond lies by serving a copy of the order issued upon the application (which states the fact of such application and the time and place fixed for a hearing thereon) upon said town, thirty days at least before the date of hearing, and by posting copies in at least two public places in the town. In some cases, after the service of this notice, meetings of the towns interested have been called and votes passed to apply for a lease in behalf of the town; and wherever this has been done, the preference has been given to the town and the lease made out accordingly.

The Commissioners have adopted this course not only as more consistent with the spirit of the law, but also as best calculated to create a general interest in the cultivation of useful fish.

When a town appropriates money to stock a pond, every citizen of the town has a direct interest in the success of the enterprise. Sufficient time has not elapsed since the earliest leases were granted to show the full benefit to be derived from this method of increasing our supply of fish, but enough has been ascertained to demonstrate its complete success, and to

make it certain that the large number of great ponds in this Commonwealth which now represent little or no value as food-producers need only a small outlay to become invaluable resources of cheap food for the people. Thus far the leased ponds have been stocked, for the most part with trout and black bass. To this list we hope soon to add the names of other useful fishes, and especially of the land-locked salmon. An account of our preparations for supplying these fishes will be found elsewhere in this Report.

In response to a circular of inquiry sent by the Commissioners to the several lessees of ponds, letters were received from nearly all, showing the most gratifying results.

Copies of some of these will be found in Appendix B, furnishing the best possible evidence that the propagation and cultivation of valuable fish is no longer an experiment.

Last year's report contains a letter from Dr. Faxon on the protection of lobsters. The attention of the legislature is again called to this subject.* Unless some restriction is made and enforced, this valuable crustacean will be entirely destroyed. To be of any use, the law should prohibit not only the catching but the sale of them under certain conditions.

There has been a constant and steady increase in every department of fish-culture. Considering how little was known in the beginning, it is remarkable that so much has been accomplished in so short a time. Mistakes have been made, as might have been expected in an enterprise so entirely new that it was almost impossible to find skilled laborers to do the work assigned them. Now hundreds of men can be found with sufficient knowledge to take charge of even large establishments for hatching and rearing fish.

The prejudice of mill-owners, arising mainly from not understanding what was or might be required of them, the opposition with which ignorance and want of faith confront almost all improvement in its early stages, has more or less retarded and increased the labors of the Commission. Fortunately much of this has disappeared, and the importance of obtaining a liberal supply of healthy food cheaper than can be produced in any other way, is becoming better understood.

* See Appendix E.

Fourteen States have appointed commissioners, and others are moving in the same direction. Congress has also appointed a United States commissioner to coöperate with the state commissions, with ample funds to render his labor effective.

It is desirable to continue the arrangement for salmon and land-locked salmon, the hatching of shad, and the introduction of such other fish as may be of value to the state. For this and the necessary expenses of the Commission, we respectfully recommend an appropriation of five thousand dollars.

THEODORE LYMAN,
E. A. BRACKETT,
ASA FRENCH,
Commissioners on Inland Fisheries.

EXPENDITURES OF COMMISSION.

Salary and travelling expenses,	\$1,656 16
Salmon and land-locked salmon enterprise,	1,000 00
Packing and transporting salmon and spawn,	92 57
Shad-spawn and distribution,	825 25
Labor and material on hatching-house,	87 75
Fishway at Mystic Lake,	149 89
Plans of fishways,	41 25
Printing blanks, &c.,	64 90
Postage, stationery, telegrams, express, &c.,	21 54
Rent of land for state hatching-house, care of Lawrence fishway,	75 00
Total,	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/> \$4,056 37

DECEMBER 1, 1873.

APPENDIX.

[A.]

COMMISSIONERS ON FISHERIES.

UNITED STATES.

PROF. SPENCER F. BAIRD, Washington, D. C.

MAINE.

[illegible]

NEW HAMPSHIRE.

[illegible]

VERMONT.

[illegible]

MASSACHUSETTS.

[illegible]

CONNECTICUT.

WILLIAM M. HUDSON,	Hartford.
ROBERT G. PIKE,	Middleton.
JAMES A. BILL,	Lyme.

RHODE ISLAND.

NEWTON DEXTER,	Providence.
ALFRED A. REED, Jr.,	Providence.
JOHN H. BARDEN,	Scituate.

NEW YORK.

[illegible]

NEW JERSEY.

[illegible]

[B.]

List of Ponds leased by the Commissioners on Inland Fisheries, under authority given by Chap. 384, Sect. 9, of the Acts of 1869.

- 1870.—Feb. 1. Waushakum Pond, in Framingham, to Sturtevant and others, 20 years.
Mar. 1. Tisbury Great Pond, in Tisbury and Chilmark, Allen Look and others, 10 years.
Apr. 1. Chauncey Pond, in Westboro', to Trustees Reform School, 5 years.
1. Mendon Pond, in Mendon, to Leonard T. Wilson and another, 20 years.
June 20. Silver Lake, in Wilmington, to Charles O. Billings and others, 20 years.
Sept. 12. Baptist Lake, in Newton, leased to J. F. C. Hyde and others, 20 years.
Oct. 15. Archer's Pond, in Wrentham, to William E. George, 15 years.
- 1871.—Jan. 10. Nine Mile Pond, in Wilbraham, to B. F. Bowles, 10 years.
30. Little Pond, in Falmouth, to F. H. Dimmick, 10 years.
Apr. —. Spectacle, Triangle and Peter's Ponds, in Sandwich, to G. L. Fessenden and another, 5 years.
17. Long Pond, in Falmouth, to Joshua S. Bowerman and three others, 20 years.
May 15. Pratt's Pond, in Upton, to D. W. Batcheller, 20 years.
18. Little Sandy Pond, in Plymouth, to William E. Perkins, 15 years.
Nov. 1. Punkapoag Pond, in Randolph and Canton, to Henry L. Pierce, 20 years.
- 1872.—Jan. 1. Sandy Pond, Forest Lake, or Flint's Pond, in Lincoln, to James L. Chapin and others, 20 years.
Apr. 1. Onota Lake, in Pittsfield, to William H. Murray and others, 5 years.
July 20. Little Pond, in Braintree, to Eben Denton and others, 20 years.

- 1873.—May 1. Meeting-house Pond, in Westminster, to Inhabitants of Westminster, 15 years.
1. Great Pond, in Weymouth, to James L. Bates and others, 15 years.
- July 1. Little Sandy Pond, in Pembroke, to A. C. Brigham and others, 16 years.
- Sept. 1. Pontoosuc Lake, in Pittsfield and Lanesboro', to E. H. Kellogg and others, 15 years.
- Oct. 1. Farm Pond, in Sherburne, to Inhabitants of Sherburne, 15 years.
1. Spot Pond, in Stoneham, to Inhabitants of Stoneham, 15 years.
- Nov. 1. Big Pond, in Webster, to Inhabitants of Webster, 5 years.
-

WEST TISBURY, October 4, 1873.

ASA FRENCH, *Commissioner on Inland Fisheries.*

DEAR SIR:—Your note of inquiry was duly received. In reply would state that the lessees of Tisbury Great Pond from March 1, 1872 (having reported to the Commissioners annually, previous to that date), to March 1, 1873, have received for fish taken, \$1,798.18. Amount paid to town, \$89.91.

There have been no new kinds of fish put in the pond during the past year, but from the barrel of white perch that were put in April 1, 1869, we caught, last spring, 25 barrels of large perch, besides large quantities of small ones, of all sizes. Out of the whole catch, we killed and sold ten barrels of the largest, suffering the rest to escape unharmed. These ten barrels weighed some 2,000 pounds, and gave us a net proceeds of \$200. This shows with what rapidity white perch will increase, if they have a chance. If those we let go increase in the same proportion as the first barrel, there will be an enormous quantity of them in three years. I think it takes about that time for them to mature. I have seen three distinct sizes, apparently one, two and three years old. We have been very careful about keeping the pond open to the sea, at proper times for the fish to come in and go out. The herring have increased very much since the lease was given; they come earlier, and are larger. Smelt-fishing was not as good, last spring, as in former years, owing to the hard winter. Smelts usually come into our ponds in December and January, but the weather was very severe during these two months.

We have been particular in giving herring and smelts a good chance to spawn. We not only allow them the days the lease requires, but give them the whole month of May, which is their best spawning month.

I have not stated the number of these two varieties taken, as it would be quite difficult to do so. I have given you the exact income of the pond, hoping it may be satisfactory.

I am truly yours,

ALLEN LOOK,
For the Lessees.

SOUTH FRAMINGHAM, MASS., October 3, 1873.

ASA FRENCH, Esq., *for the Commissioners on Inland Fisheries for the Commonwealth of Massachusetts.*

DEAR SIR:—In compliance with your request, dated September 24, 1873, I write the following notes.

The lease of Waushakum Pond, granted by your body for twenty years, under date of February 5, 1870, was soon after assigned to an association with the title of the Nobscet Fishing Club. Thirty-two gentlemen at present constitute the club.

Strenuous efforts were at once made to stock the pond. Correspondence was opened with dealers in live fish, but no young black-bass fry could be procured. We therefore contracted with a dealer for adult fish of the Champlain variety. As it was desirable to anticipate the spawning season, we offered extra inducements for fish filled with spawn.

On Friday, May 20, 1870, thirteen black bass were received in good condition, and liberated in the pond. These fish were about nine inches long, and would average somewhat under a pound, by estimate.

On Wednesday, June 22, 1870, one hundred and eighty additional fish were delivered. The largest were estimated at about one pound weight, the larger portion much smaller.

On Friday, June 7, 1872, two fish, of about three-quarters of a pound weight, were transferred to our pond from Lake Cochituate.

In 1870, several hundred dollars were expended in deepening the outlet of the pond, and in sinking wells, and enclosing artificial ponds for the purpose of raising trout. Everything seemed favorable to the project, as our plans were based on the flow of water for many years past, as remembered by aged men conversant with the neighborhood. The dry season following in 1871 and 1872 stopped all work in this direction.

In the spring of 1871, efforts were made to procure land-locked salmon. Although an agreement for delivery was made, none ever arrived. From outside sources, I learned that our fish had been started from the Schoodic region, but had all perished during a warm spell which came on during the transit. Of the truth of this I cannot vouch.

During the winter season, pickerel-fishing has been largely carried on through the ice, and great numbers of these fish taken. During the first of the fishing, it was not unusual to take fish weighing between two and three pounds each; but during the winter of 1872-73, I heard of but one fish being taken exceeding two pounds. During a careful supervision of the pond for the past season, and notwithstanding a careful watch along shore, but few young pickerel, and no large ones, have been seen by myself or friends.

With reference to the growth and habits of the black bass, I can give but little information. It has been difficult to watch the spawning, or the arrival of the fish from deep water in the spring. In order that my statements may be free from conjecture, I prefer to give a transcript of a few notes, made at the time they are dated.

- 1870.—Aug. 20. Fry in shallows, from $\frac{3}{4}$ inch to $1\frac{1}{4}$ inches long.
 Sept. -. Numbers of young fish to be seen along shore, in the shallows, and amongst the lily-pads.
- 1871.—June -. Numerous patches of small fry seen near the surface of the water, in compact, black swarms; presumably, bass.
 Aug. -. Young bass, of a size to be readily seen and studied.
- 1873.—May 1. Saw black bass in shallows, $1\frac{1}{2}$ inches long, and larger.
 July 22. Large numbers of fish, from 1 inch to $1\frac{1}{2}$ inches long, in sight, in shallow water. Some remain near the bottom, and are light colored; others keep near the surface, and display the greatest activity in rushing for stray bits of rubbish, thrown on the surface. One fellow, about $1\frac{1}{2}$ inches long, was carrying about a small hornpout, swallowed tail-end first, until further ingress was stopped by the side spiny fins.
- Aug. 26. Young bass, about three inches long, in sight; occasionally a youngster nearly an inch longer.
- Sept. 14. Bass still about boat-house. Counted eleven together, of a size varying from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches.
- Oct. 3. But one solitary fish, about 4 inches long, to be seen in the usual haunt.

I have record of the following catches :—

- 1872.—May 18. One 10 inches long; one 14 inches long.

- 1872.—May 28. One 12 inches long; one 14 inches long, 4 inches broad;
one $15\frac{1}{2}$ inches long, $4\frac{1}{2}$ inches broad.
- June 8. One $12\frac{1}{2}$ inches long.
These fish, after being measured, were returned to the
water. One afterwards was found dead.
- 1873.—Mar. 11. One 14 inches long, 4 inches broad; weight, $1\frac{3}{4}$ pounds.
Caught through the ice.
12. Three fish, $15\frac{1}{2}$ inches each, caught through ice, and
removed for the purpose of stocking a neighbor's
pond.
- Aug. 9. Three fish, about 2 pounds each. Eleven fish, aggregat-
ing 23 pounds.
10. One fish, 17 inches long; $2\frac{1}{2}$ pounds weight.
12. One fish, $1\frac{3}{4}$ pounds.
14. Three fish; 2 pounds, 2 pounds, $2\frac{1}{4}$ pounds.
15. Two fish; $1\frac{1}{2}$ pounds, $1\frac{1}{2}$ pounds.
16. One fish, $17\frac{1}{2}$ inches long, $2\frac{3}{4}$ pounds.
17. Five fish, 2 pounds, $1\frac{7}{8}$ pounds, $1\frac{1}{8}$ pounds, 1 pound,
1 pound.
22. 1 fish, $1\frac{1}{2}$ pounds.
23. Two fish, $2\frac{1}{2}$ pounds, 3 pounds.
- Oct. 3. Found a $2\frac{1}{2}$ pounds' fish floating dead.

Totals :—Removed in 1872, 1 fish.

“ 1873, 35 fish.

We are positive that many fish have been caught by parties un-
lawfully fishing on the pond. The above list comprises those fish
only which were taken under our supervision.

SUMMARY FOR 1873.

I have heard of one fish being taken, $3\frac{1}{2}$ pounds weight (not vouched for).
three fish, $15\frac{1}{2}$ inches long.
two fish, 1 pound each.
three fish, $1\frac{1}{2}$ pounds “
three fish, $1\frac{3}{4}$ “ “
seven fish, 2 “ “
four fish, $2\frac{1}{2}$ “ “
one fish, $2\frac{3}{4}$ “
one fish, 3 “
eleven fish, aggregating 23 pounds.

If there is any other information which I can give, I shall be
pleased to do so, upon request.

Respectfully yours,

E. LEWIS STURTEVANT.

NEWTON HIGHLANDS, October 31, 1873.

To the Commissioners on Inland Fisheries.

GENTS:—In response to your request to give some information concerning our experiment with black bass in Baptist, or Wiswall's Pond, Newton Centre, I would say, that we leased the pond, containing about thirty-three acres, from your Board, during the summer of 1870, and in November of that year stocked the same with bass, by putting in one hundred and two fish, weighing from three-fourths of a pound to two pounds each. There were in the pond pickerel, yellow perch, suckers, shiners, pouts, eels, and minnows. The pond has a clear gravelly or sandy bottom, with no apparent inlet, and only during very high water, any outlet. It varies in depth, but nowhere exceeds forty feet. During the latter part of the summer of 1871, and every season since, many young oass have been seen about the shore of the pond, and each season the old fish have been seen on their spawning-beds, in water from four to seven feet deep. No fish have been caught out, to our knowledge, until, by vote of our club, each member was allowed to catch not exceeding three fish. Twelve have been caught, weighing in the aggregate $23\frac{3}{4}$ pounds. These were mostly old fish, from those that were put into the pond. The largest fish caught weighed three and a half pounds, and the smallest half a pound. We found fish that must have been born in the pond, to weigh three-fourths of a pound, and we came to the conclusion that they were of the first year's spawning. We caught others that weighed half a pound, that we suppose were hatched the second year.

The project seems to be a perfect success, and we are very much pleased. The public have respected our rights, and have never attempted, to our knowledge, to fish in the pond since we became the lessees. We see no reason why every acre of fresh water within the limits of the State should not be devoted to the raising of black bass or other useful fish.

Hoping that the results of our experiment may encourage many others to go and do likewise, I remain, yours truly,

JAMES F. C. HYDE.

WRENTHAM, October 7, 1873.

To the Commissioners on Inland Fisheries.

SIRS :—Mr. George desires me to reply to your communication of the 24th ult., asking a report of the attempt to stock Archer's Pond with black bass.

This pond covers an area of perhaps from 300 to 400 acres, and is fed entirely by springs, furnishing an abundance of the best water, but not many shoals or coverts for young fish. It moreover abounds in pickerel. It has therefore been a question with us how well bass would thrive under the circumstances. Mr. George first separated from the main pond a cove covering an area of four or five acres; into this put, in the autumn of 1870, about twenty black bass. The following year increased the number to about one hundred. These fish weighed from one-half pound to two pounds each. They were removed to the large pond, a part in 1872, and a part this year, to the number of 93, and were found to weigh from $2\frac{1}{2}$ to $3\frac{1}{2}$ pounds. I have been making careful observations recently, to determine, if possible, whether the young bass are multiplying any. I have not been able to discover schools of young bass in large numbers, and certainly identify them, but have seen enough fish from $\frac{1}{4}$ to $\frac{1}{2}$ pound weight to feel sure that propagation is going on.

Mr. George has not yet allowed any bass to be removed from the pond, nor does he intend to do so at present. He wishes the pond to be thoroughly stocked before fishing is permitted.

Yours, very truly,

W. R. TOMPKINS,
FOR WM. E. GEORGE.

MILFORD, October 6, 1873.

Commissioners on Inland Fisheries.

SIRS :—In accordance with the requirements of the lease for Mendon Pond, I transmit a report of our doings.

In May, 1870, we brought from Cayuga Lake forty-eight black and six rock bass, and put the same in Mendon Pond.

In the summer and winter of 1872, we took with hook one hundred and fifty black bass, weighing from three-fourths to one and a half pounds. The present season there have been about fifty taken,

weighing from one to three pounds. The fish seem to do finely, there being plenty of food for them as yet.

Yours respectfully,

L. J. WILSON,
Lessee of Mendon Pond.

SANDWICH, Sept. 25, 1873.

Asa French, Esq.

DEAR SIR :—Your circular of the 24th ult. received. I had stocked the ponds named in the lease the autumn previous. I put 64 black bass in Triangle Pond; 70 black bass in Spectacle Pond; and 56 black bass in Peter's Pond.

These ponds have not been fished, to my knowledge. The farmers living near them seemed much interested, and have warned people off who came to fish. They report great numbers of small bass seen near the shore, and, from all accounts, I judge they are doing well. I have also stocked the mill-pond in the village; these have multiplied, and there is a great show of small bass. I have put fish in several other ponds, at considerable expense,—have paid out \$160 for fish for stocking. Other towns have been assisted by the State, which, I have understood, paid all expenses. However, I will not complain if the ponds can be properly protected when the time arrives for fishing.

I have a small and deep pond, of seven or eight acres, which I stocked; the water seems alive with small fish.

Yours truly,

GEO. L. FESSENDEN.

[C.]

COLD SPRING TROUT PONDS,
CHARLESTOWN, N. H., NOV. 18. }*Mr. E. A. Brackett.*

DEAR SIR:—In reply to your request for some account of the Sacramento River salmon, the eggs of which I forwarded to you this fall, I beg permission to enclose the following notes.

The McCloud River, on which the salmon eggs were taken, is one of the head-waters of the Sacramento. As you are aware, the main tributaries of the Sacramento are the American, the Pit, or Upper Sacramento, the Feather and the Little Sacramento.

Formerly, all these furnished spawning-grounds for the Sacramento salmon, but since the discoveries of gold in California, the American and Feather rivers have been completely ruined as spawning-grounds by the wash from the gold mines of the river basins, leaving only the Pit and Little Sacramento for the salmon to deposit their eggs in.

In all these and their tributaries the salmon are in the habit of spawning every year, to a greater or less extent, but especially in the McCloud, a tributary of the Pit, or Upper Sacramento.

The McCloud heads in Mt. Shasta, and is nearly seventy miles long, with an average width of about forty yards. This clear, cold and beautiful mountain-stream, fed perennially by the melting snows of Shasta Butte, affords the finest possible spawning-grounds for salmon, and is the favorite resort of the Sacramento salmon in the spawning season. The salmon-breeding camp of the United States Fish Commission is located on this stream, two miles and a half above its mouth, and about 300 miles from the outlet of the Sacramento into the ocean at San Francisco, and nearly north of it. As this river is now inhabited only by Indians, they having murdered the only white man living on it a few days before I left, last September, these spawning-grounds, for the present at least, seem likely to remain undisturbed.

ning up it till October. Even as late as November, a few, known as

The salmon enter the McCloud River in March, and continue run-the fall run, ascend the river. After the winter rains begin to fall in December, the salmon disappear from the McCloud; at least, none are caught from December to March, and it is probable there are very few or none in the river during that interval.

In the main Sacramento River, the running of the salmon is quite different. They begin to come into the river from the sea in small numbers in November; the numbers increase somewhat till March, when there is a very large run, which lasts till June. During the months of June and July they are less abundant in the river, but in August there is another large run, and from that time they continue to ascend the river in greater or less numbers till November, when the old runs end, and the new run of the year begins to come up from the sea again.

The salmon of the Sacramento are best in the winter months; they are most abundant in the spring and cheapest in the summer.

Only one kind of salmon is found in the Sacramento in any numbers. It is at present thought to be identical, or nearly so, with the *Salmo quinnat* of the Columbia River,* which, in turn, is thought to be the same as the salmon of the opposite Asiatic coast, *Salmo orientalis*. It certainly is not the *Salmo salar* of the Atlantic coast of America or Great Britain.

There is a large trout found sometimes in considerable quantities in the main Sacramento, which is commonly known as the Sacramento salmon-trout. Occasionally, though but very seldom, a salmon with a humped back strays into the river. It is called the hump-backed salmon, and is probably the *Salmo proteus*† of

* *Salmo quinnat*.—Specific characters.

“*Adult*.—Head pointed and large, forming about a fourth of the length from the snout to the end of the scales on the caudal; dorsal outline regularly arched; caudal deeply cut out (in the dried specimen forked); snout cartilaginous, as in *Salmo salar*; chin pointed, a triangular bare projection, extending beyond the teeth. Colors.—General tint of the back, bluish gray, changing after a few hours’ removal from the water into mountain green; sides ash gray, with silvery lustre; belly, white; back above the lateral line studded with irregular rhomboidal or star-like black spots, some of them ocellated; dorsal fin and gill covers slightly reddish; tips of the anals and pectorals blackish gray; the dorsal and caudal thickly studded with round and rhomboidal spots, back of the head sparingly marked with the same. Whole body below the lateral line, with the under fins, destitute of spots.”—*Gairdner*.

† *Salmo proteus*.—Specific characters.

“*Male*.—Dorsal profile much more arched than in *Salmo scouleri*. After entering fresh water an adipose hump becomes strikingly apparent, its greatest prominence being nearly opposite a point midway on a line drawn from the eye to the anterior margin of the base of the dorsal fin; intermaxillary projection curved strongly downwards, as in *Salmo scouleri*; jaws long, as in latter, the lower terminated by a dilated knob (as in several other species of the genus), which is armed with four or five strong sharp teeth on each side; labials and limbs of the lower jaw closely set, with very fine sharp teeth, finer and more numerous than those of the *Salmo scouleri*; vomerine and palatine teeth much larger than those of the labials, those on the vomer disposed in a single row on its anterior portion; tail rather strongly lunated, and profusely dotted with elongated, oval, dark spots; the other fins usually unspotted, adipose rather elongated; scales much smaller than those of the *Salmo scouleri*; those of the back are much smaller than those below the lateral line.”—*Suckley*.

Kamtchatka and Puget's Sound. It is exceptional, however, and so rarely found, that it is of no importance except as a fact in the natural history of the fish of the river.

The regular Sacramento salmon undergo great changes after they enter the fresh water, much greater than even the Eastern salmon. When they first leave the ocean they are plump and silvery in appearance, both sexes looking nearly alike. In the main Sacramento, as far up as Sacramento City, they maintain this appearance, and are in fine condition for the table until about the first of June. After this they begin to deteriorate; the fish becomes less symmetrical and grosser looking, the scales seem larger and coarser, and the flesh is inferior. They continue to deteriorate until about two weeks before spawning, when they lose their silvery color entirely, and become of a dark olive. Their scales disappear, and are entirely absorbed into the skin, which is perfectly smooth, and very slimy.

The sexes now show a marked difference; the females are distended with spawn, which gives them a plump appearance below, while the males are deep and thin. The head of the female has not materially changed, but the head of the male has become thin and long, the nose being flattened, and the jaws pointed. The expression of the eyes and face becomes ferocious and repulsive in the extreme, and is intensified by the presence in both jaws of long rows of large, white, pointed teeth, in some instances half an inch long.

As the season advances, these characteristics become more and more confirmed till after the spawning, when the fish of both sexes become weak and emaciated and die. These latter changes are not seen in the main river, but only in the smaller streams which contain the spawning-grounds.

The most peculiar feature about the Pacific coast salmon of California, is that they are spawning somewhere almost all the year round. For instance, at the extreme head-waters of the Sacramento, under Mt. Shasta, they begin to spawn late in June or early in July. A little farther down the river they spawn in July and the first of August; at the breeding-camp on the McCloud, in August and September. Further down yet, in the small streams emptying into the main Sacramento, they spawn in September, October and November; and in smaller rivers on the coast, as the Eel and Russian rivers, they spawn in December, January and February. This singular feature in regard to the spawning of these salmon is the more unexpected to those familiar only with Eastern salmon, because in the Atlantic rivers of America the spawning season of this fish is very short indeed.

We took the first ripe salmon eggs at our camp on the McCloud this year on the 26th of August. The first eye-spots showed, the

12th of September; the first fish were hatched the first week of October. The quantity of eggs which can be obtained there is practically unlimited,—millions can be secured as easily as thousands.

The Sacramento salmon averages through the year in the main river about fourteen pounds in weight in the winter, and about twenty pounds in the summer. The largest salmon caught in the Sacramento, to my knowledge, weighed fifty-nine pounds.

The yield of eggs is much less in proportion to the weight of the parent fish than with the Atlantic salmon, and does not exceed 500 eggs to each pound weight of the parent.

The salmon of the Miramichi (an Atlantic coast river, in New Brunswick, Canada) yield 1,000 eggs to the pound.

The salmon of the Sacramento are still very abundant, notwithstanding the encroachments of the gold miners, and the great numbers annually captured, and as long as the present spawning grounds remain unmolested, their numbers are not likely to decrease.

The quality of the flesh of the Sacramento salmon is very superior during the winter months, and hardly less so in the spring. During the summer they deteriorate very much, and are a coarse and inferior fish for the table; while at and near the spawning season they are emaciated and infested with parasites, and wholly unfit to eat.

The reputation of the Sacramento salmon as a table fish has suffered very much from the circumstance that it has, up to the present year, been caught and sent to market every month in the year, even when taken directly from the spawning beds, and as the consumers do not usually discriminate between the fish in season and the fish out of season and make the proper allowance for the difference, the discredit of the salmon out of season and out of condition falls upon the fish in general, and often gives it a bad name.

There is no question, however, about the Sacramento salmon in season being a fish of very fine quality indeed, and I am wholly unable, from my own experience, which has been considerable in the consumption of both Atlantic and Pacific salmon, to say that the Atlantic salmon are any better in any respect than the winter salmon of the Sacramento, and I do not believe that any one can affirm positively that one is better than the other.

Very truly yours,

LIVINGSTON STONE,

*In charge of the U. S. Salmon Breeding Camp,
McCloud River, California.*

[D.]

WASHINGTON, D. C., November 16, 1872.

MY DEAR SIR:—I am in receipt of your letter asking my opinion as to the probable cause of the rapid diminution of the supply of food-fishes on the coast of New England, and especially of Maine. The fact, as stated, needs no question; it is too patent to the experience of every man who has been interested in the fisheries, whether as a matter of business or as an amateur. An examination of the early records of the country, in which the subject is referred to, cannot fail to convince the most skeptical.

We are all very well aware that, fifty or more years ago, the streams and rivers of New England emptying into the ocean were crowded, and almost blockaded, at certain seasons, by the numbers of shad, salmon and alewives seeking to ascend, for the purpose of depositing their spawn, and that, even after these parent fish had returned to the ocean, their progeny swarmed to an almost inconceivable extent in the same localities, and later in the year descended to the sea in immense schools. It was during this period that the deep-sea fisheries of the coast were also of great extent and value. Cod, haddock, halibut, and the line fish generally, occupied the fishing-grounds close to the shore, and could be caught from small open boats, ample fares being readily taken within a short distance of the fishermen's abodes, without the necessity of resorting to distant seas. Now, however, the state of things is entirely different. The erection of impassable dams upon the waters of the New England States, and especially of the State of Maine, has prevented the upward course of the anadromous fishes referred to, and their numbers have dwindled away, until at present they are almost unknown in many otherwise most favorable localities.

The fact has been observed, too, that with the decrease of these fish there has been a corresponding diminution in the numbers of the cod and other deep-sea species near our coasts; but it was not until quite recently that the relationships between the two series of phenomena were appreciated as those of cause and effect. Halibut, it is believed, can be reduced in abundance by overfishing with

the hook and line, but experiences in Europe and America coincide in the confirmation of the opinion, that none of the methods now in vogue for the capture of fish of the cod family (including the cod, haddock, pollock, hake, ling, etc.), can seriously affect their numbers. Fish, the females of which deposit from one to two million of eggs every year, are not easily exterminated unless they are interfered with during the spawning season; and as this takes place in the winter, and in the open sea (the spawn floating near the surface of the water), there is no possibility of any human interference with the process. Still, however, these fish have become comparatively very scarce on our coast, so that our people are forced to resort to far distant regions to obtain the supply which formerly could be secured almost within sight of their homes.

It is now a well-established fact that the movements of the fishes of the cod family are determined: first, by the search after suitable places for the deposit of their eggs; second, by their quest of food. Thus, the cod, as a summer fish, is comparatively little known on the coasts of northern Europe; but as winter approaches, the schools begin to make their appearance on the north-western coast of Norway, especially around the Loffoden Islands, arriving there finally in so great numbers that the fishermen are said to determine their presence by feeling the sounding-lead strike on the backs of the fish.

Here they spend several months in the process of reproduction, the eggs being deposited in January, and the fishery being prosecuted at the same time. Twenty-five to thirty thousand men are employed in this business for several months; at the end of which the fish disappear, and the fishermen return to their alternate occupations as farmers and mechanics. The fish are supposed to move off in a body to the Grand Banks, which they reach in early summer, and where they fatten up and feed until it is time for them to return again to the north-east. It is believed that the great attraction to the cod on the Banks consists, in great part, of the immense schools of herring or other wandering fish, that come in from the region of the Labrador and Newfoundland seas, and which they frequently follow close in to the shore, so that they are easily captured.

It is well known that the presence or absence of herring determines the abundance of hake and cod on the Grand Manan Fishing Banks, the fishes of the first-mentioned family having a peculiar attraction to carnivorous fish of all kinds. It is, however, the anadromous fishes of the coast which bring the cod and other fishes of that family close in upon our shores. The sea-herring is but

little known outside of the region of the Bay of Fundy, excepting in September and October, when they visit the entire coast, from Grand Manan to Scituate, for the purpose of depositing their spawn; this act depending upon their finding water sufficiently cold for their purposes, a condition which of course occurs later and later in the season, in going south.

In the early spring, the alewives formerly made their appearance on the coast, crowding along our shores, and ascended the rivers in order to deposit their spawn, being followed, later in the season, by the shad and salmon. Returning when their eggs were laid, these fish spend the summer along the coast; and in the course of a few months were joined by their young, which formed immense schools in every direction, extending outward, in some instances, for many miles. It was in pursuit of these and other summer fish, that the cod and other species referred to came in to the shores; but with the decrease of the former in number, the attraction became less and less, and the deep-sea fishes have now, we may say, almost disappeared along the coast. It is therefore perfectly safe to assume that the improvement of the line-fishing along the coast of Maine is closely connected with the increase in number of alewives, shad and salmon; and that, whatever measures are taken to facilitate the restoration of these last-mentioned fish to their pristine abundance, will act, in an equal ratio, upon the first-mentioned interest. The most important of the steps in question are the proper protection of these spring fish, and the giving to them every facility needed for passing up the streams to their original spawning grounds; this is to be done, of course, by the construction of suitable fishways and ladders. The real question at issue in regard to the construction of these fishways is, therefore, after all, not whether salmon shall become more plentiful, so that the sportsmen can capture them with the fly, or the man of means be able to procure a coveted delicacy in large quantities, and at moderate expense. This is simply an incident; the more important consideration is, really, whether the alewife and shad shall be made as abundant as before, and whether the cod, or other equally desirable sea-fish shall be brought back to our coast, so that any one who may be so inclined can readily capture several hundred weight in a day.

The value of the alewife is not fully appreciated in our country. It is in many respects superior to the sea-herring as an article of food; is, if anything, more valuable for export; and can be captured with vastly less trouble, and under circumstances, and at a season much more convenient, for most persons engaged in the fisheries.

I have already extended this letter to an unreasonable length, and must therefore bring it to a close, with the assurance, however, that all the propositions I have thrown out can be amply substantiated.

Very truly yours,

SPENCER F. BAIRD,

U. S. Commissioner of Fish and Fisheries.

E. M. STILWELL, Esq., *Bangor, Maine.*

[E.]

CONCORD, MASS., December 12, 1873.

To the Board of Fish Commissioners :

Presuming that the members of the Fish Commission are fully aware of the dangers to which the lobster fishery of the coast of New England is exposed by reason of the present practices of fishing and canning, I take the liberty of forwarding to you the inclosed letter from one of the oldest and largest dealers in Boston. The long experience of the members of this firm in the business, together with the extent of their trade, has made them perfectly familiar with the fishing-grounds of the coast, their extent and character, and with the history and habits of the lobster. Their statements, therefore, may be relied upon, and their opinions are the results of practical experience and absolute knowledge. There are some points mentioned by Mr. Johnson, which will undoubtedly need to be further considered in determining what provisions of law are necessary to attain the object desired, and the inclosed letter will aid us in an intelligent discussion of them.

Very respectfully, yours, &c.,

WM. W. WHEILDON.

Boston, December, 1873.

DEAR SIR:—In compliance with your request, we shall be glad to give you our views as to the best methods of protecting the lobster fishery ; as it must be patent to any one at all acquainted with the matter, that unless there is some action taken for their proper regulation and protection, that in a few years at most they must cease to be used as an article of general consumption. Having been engaged in this business for more than thirty years enables us to judge, perhaps, as correctly as any one of the best method of accomplishing the desired end,—that is, of furnishing to the public, at the least possible cost, the needed supply of this wholesome and

nutritious article of food. We should like to give you, in a few words, some facts which may not have been suggested to your mind in regard to what has been and is being done in this business. You are probably aware that the extent of our coast where lobsters breed and propagate rapidly is in reality quite limited, and may be described as extending from Cape Ann to Cape Cod, in Massachusetts, and in Maine from Cape Elizabeth to Mount Desert, with considerable deduction for barren grounds between those points. Our observation and experience teach us that they do not propagate and grow rapidly except at the mouth of the larger bays, where the principal rivers empty; the straight, bold shores do not furnish such protection or food as they require for their most rapid development; for by fishing in such localities one or two years, the grounds become nearly depopulated, and the absence of the young and new-shelled lobsters proves that it is not favorable for the protection of the spawn, or rather the young lobster as it comes from the spawn, and it also seems to prove that lobsters return to the same grounds each succeeding year or season, and is further demonstrated by the fact that the character of the lobster, as to appearance in shape and color, is always the same in the same localities, though it may not in distance be more than a mile or two; for any one in the habit of handling lobsters from all the different places will readily determine where they were caught, and whether old or new ground. There are many other interesting facts in this connection; but perhaps this is enough to show you that we have not as much breeding ground as is generally supposed, and we are in reality doing greater injury to the fishery than at first thought seems possible. Now our views in regard to the proper course to be taken for their protection differ somewhat from others that we have heard advanced; but we think we can demonstrate clearly that our plan is the only one that will properly protect the lobsters, and at the same time furnish the market with its needed supply. To fully understand the subject, we must first inquire what has thus rapidly caused this falling off in catch, and decrease in size and quality. There is but one answer to the question. The consumption by the factories all along shore of everything caught for the purpose of canning; as they use everything, without regard to size or condition, leaving nothing to grow or reproduce, which must of necessity in a short time entirely break up the grounds. Facts are not wanting to show this conclusively, and no one understands this better than ourselves, for where formerly we could load our smacks with lobsters of good quality year after year without any apparent diminution in size or inferiority in quality, as soon as the fishermen began to sell their cullings or lobsters unfit for the market, either on

account of size or shell, to the factories, in two or three years at most, we were obliged to seek other grounds, as these were completely ruined, furnishing few of proper size or condition for the market.

The history of the business for the past few years seems to indicate that, although we have lobsters enough, under proper regulations, to supply our own markets for all time, we cannot supply the world, or if foreign markets, then bring them into proper competition with us, as they are not so under present circumstances; for by canning the refuse that should be returned to the water again, lobsters can be supplied to foreign markets at a less price than they are sold for here in the shell. The only thing that can properly adjust this matter and protect ourselves is to make such a law as will require that a lobster, in order to be fit for sale, shall weigh at least two pounds, with good shell, and a penalty for selling or buying any of less weight or poorer condition. Such a law would meet the approval of the fishermen themselves, as they are well aware that the present tendency of affairs is to ruin them. The protection proposed by some even scientific men, to stop catching them certain months in the year will not remedy the matter, nor bring about the desired result; for if the packers or any one else are still allowed to use everything caught, they will only increase their facilities while they are at work, still taking from the grounds all young and immature lobsters, and little or nothing will be gained in this way. Besides, it deprives the public for so many months of what is really needed, as the months selected for stopping would be when there is nothing that will take their place, and the consumption perhaps the most. We are all well aware that something must and will be done in this matter, and we are anxious that the right steps may be taken, and if any more laws are to be passed, they will not be like some that still exist, of no effect, and worse than useless, as they do not afford any protection and are entirely disregarded, making it still more difficult to carry out any effective law.

Yours respectfully,

(Signed) S. M. JOHNSON,
Of the firm of Johnson & Young.

To W. W. WHEILDON, Esq., *Concord, Mass.*

[F.]

SUPREME COURT OF THE UNITED STATES.

DECEMBER TERM, 1872.

THE HOLYOKE WATER-POWER COMPANY, PLAINTIFF IN ERROR, <i>v.</i> THEODORE LY- MAN AND EDWARD A. BRACKETT, <i>Com-</i> <i>missioners on Inland Fisheries, etc.</i>	}	In error to the Supreme Judicial Court of the Com- monwealth of Massachu- setts.
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Mr. Justice CLIFFORD delivered the opinion of the Court. .

Rivers, though not navigable even for boats or rafts, and even smaller streams of water, may be and often are regarded as public rights, subject to legislative control, as the means for creating power for operating mills and machinery, or as the source for furnishing a valuable supply of fish, suitable for food and sustenance.

Such water-power is everywhere regarded as a public right, and fisheries of the kind, even in waters not navigable, are also so far public rights that the legislature of the State may ordain and establish regulations to prevent obstructions to the passage of the fish, and to promote the usual and uninterrupted enjoyment of the right by the riparian owners.

Proprietors of the kind, if they own both banks of the water-course and the whole soil over which the water of the stream flows, may erect dams extending from bank to bank to create power to operate mills and machinery, subject to certain limitations and conditions, and may also claim the exclusive right of fishery within their territorial limits, subject to such regulations as the legislature may, from time to time, ordain and establish.

Persons owning the whole of the soil constituting the bed and banks of the stream are entitled to the whole use and profits of the water opposite their land, whether the water is used as power to operate mills and machinery or as a fishery, subject to the implied condition that they shall so use their own right as not to injure the concomitant right of another riparian owner, and to such regulations as the legislature of the State shall prescribe.

Where such a proprietor owns the land on one side only of the stream, his right to the land and to the use of the water, whether

used as power to operate mills and machinery or merely as a fishery, extends only to the middle thread of the stream, as at common law, and is subject to the same conditions and regulations as when the ownership includes the whole soil over which the water of the stream flows.

Authority to erect dams across such streams for mill purposes results from the ownership of the bed and the banks of the stream, or the right to construct the same may be acquired by legislative grant, in cases where the legislature is of the opinion that the benefit to the public will be of sufficient importance to render it expedient for them to exercise the right of eminent domain and to authorize such an interference with private rights for that purpose.

Land^s belonging to individuals have often been condemned for such purposes, in the exercise of the right of eminent domain, in cases where, from the nature of the country, mill-sites sufficient in number could not otherwise be obtained, and that right is even more frequently exercised to enable mill-owners to flow the water back beyond their own limits, in order to create sufficient power or head and fall to operate their mills.

Concomitant with the authority to erect such dams for such purposes over the beds of water-courses, as resulting from the title to the banks and bed of the stream, is also the exclusive right of fishery, which also has its source in the same ownership of the soil, and the better opinion is that it is not divested or extinguished by any legislative act condemning the land to the use of another for mill purposes, unless the words of the grant conferring the authority to construct the dam plainly indicate that such was the intention of the legislature.

Water-rights of the kind, whether the streams are used for mill purposes or merely as fisheries, are justly entitled to public protection, as they are in many cases of great value to the community where they exist, but they are the source of many conflicting interests which the state legislatures as well as the courts have found it difficult to adjust, as appears from the countless efforts which have been made in that behalf without complete success.

Certain persons, their associates and successors, on the twenty-eighth of April, 1848, were incorporated by the name of the Hadley Falls Company, for the purpose of constructing a dam across the Connecticut River, and one or more locks and canals, in connection with the said dam, to create a water-power to be used for manufacturing and mechanical purposes, and also for the purpose of navigation, with all the powers and privileges and subject to all the duties, liabilities and restrictions set forth in the thirty-eighth and

forty-fourth chapters of the revised Statutes of the State. (8 Special Laws, 949. Rev. Stats., 328-366.)

Power and authority are given to said corporation to construct and maintain a dam across said river at South Hadley, at any point between the present dam of the proprietors of the locks and canals, and the lower locks of the said proprietors, of a height sufficient to raise the water to a point not exceeding the present level of the water above the dam of the said proprietors; and the farther provision is that the corporation shall pay such damages to the owners of the present fish-rights above the dam to be erected as shall be awarded by the county commissioners.

Pursuant to the Act of incorporation the stockholders accepted the charter, constructed the dam, paid certain damages to the owners of fish-rights above the dam as constructed, and expended, as the respondents allege, more than two millions of dollars, including the cost of the dam and the damages paid to parties adversely interested, in constructing their improvements, and failed in business. New parties acquired the title to the dam and the other improvements, and on the thirty-first of January, 1859, the respondents in this case, as such new proprietors, their associates and successors, were incorporated by the name of the Holyoke Water-Power Company, and they were empowered to uphold and maintain the dam and other improvements constructed by the prior company, and to erect and maintain a water-power to be used for the same purposes as those described in the prior charter, with the same powers and privileges and subject to the same liabilities and restrictions. (Private Acts, 1859, 225.)

Special power was conferred upon the governor, by and with the advice and consent of the council, by the Act of the fifteenth of May, 1866, to appoint commissioners of fisheries in the said river and one other river, to hold their offices for five years unless sooner removed, and it was made their duty by the same Act forthwith to examine the several dams on said rivers in said State, and after notice to the owners of the dams, to determine and define the mode and plan by which fishways shall be constructed, suitable and sufficient to secure the free passage of salmon and shad up said rivers during their accustomed seasons. Said commissioners are also authorized to agree with the proprietors of such dams to construct at their own expense said fishways according to the plans adopted, if the proprietors consent so to do, and if they fulfil the agreement and the fact is duly certified to the secretary of state, the provision is that the same, for the period of five years, shall be taken and deemed as in lieu of the fishways which such a proprietor is now required by law to keep and maintain for that purpose.

Unless the proprietor of such a dam shall agree with the commissioners within thirty days from the time he is so furnished with the plan to build such fishway in the manner prescribed, the commissioners are authorized to construct the same in behalf of the State, and in that event the provision is that the expense shall be a charge against the owner of such dam, and the same may be recovered of the proprietor in an action of contract in the name of the State, or the commissioners may enforce the construction of such a fishway, by a bill in equity, to compel a specific performance. (Sess. Acts 1866, 231. Sess. Acts 1867, 741. Sess. Acts 1869, 677-741.)

Due notice having been given by the complainants, as such commissioners, to the respondents as the owners of said dam, of their intention to examine the dam pursuant to the provisions of the aforesaid Acts of the legislature, they proceeded to perform that duty and determined and defined the mode and plan in which the fishway should be constructed therein, suitable and sufficient to secure the free passage of salmon and shad over the dam and up the river during their accustomed seasons. They also furnished the respondents with the plan and specifications of such fishway, and filed a copy of the same in the office of the secretary of state, and requested the respondents to construct such a fishway or to agree with them as such commissioners to comply with that requirement; but it appears that the respondents refused and neglected so to do, insisting that the State had no power or right to require them to build such a fishway. Entirely different views were entertained by the complainants, and they instituted the present suit to compel the corporation respondents to comply with that requirement, and the state court entered a decree for the complainants. (Same case, 104 Mass. 451. *Sampson v. Weston*, 8 Cush. 347.)

Dissatisfied with that decree the respondents sued out the present writ of error and removed the cause into this court.

Ample power was vested in the first company to hold real estate, not exceeding five hundred thousand dollars in value, but their Act of incorporation did not give the company any authority to condemn the real estate of another to any extent or for any purpose. They were required to "pay such damages to the owners of present fish-rights existing above the dam" as should be awarded by the county commissioners of the counties in which said rights existed, and they might at any time apply to said commissioners to proceed, ascertain and determine the damages to said fish-rights, subject, however, to an appeal to a jury from such assessment, as in cases of assessment of damages for land taken for highways.

Damages for injuries to fish-rights above the dam were to be ascertained and assessed, but no authority was conferred to condemn

the land of another for the site of the dam or for any other purpose, nor was any provision made to ascertain and assess the damages to fish-rights below the dam, nor does either charter contain a provision exempting the builders and owners of the dam from the obligation to construct suitable and sufficient fishways for the free passage of fish up the river during the accustomed seasons.

None of these propositions are controverted, but the respondents insist that the Acts of the legislature under which they have been required to make the fishways in question, impair the obligation of the contract contained in the charter incorporating their grantors, and that those Acts are inoperative and void as contravening the article of the Constitution which prohibits the States from passing any law impairing the obligation of contracts. Such a charter, when accepted by the corporators, is undoubtedly a contract that the powers, privileges, and franchises granted shall not be restrained, controlled or destroyed without their consent, unless a power for that purpose is reserved to the legislature in the Act of incorporation, or in some prior general law in operation at the time the Act of incorporation was passed. (*Dartmouth College v. Woodward*, 4 Wheat. 709-712. *Wales v. Stetson*, 2 Mass. 146.)

Private charters of the kind are held to be contracts, because they are based for their consideration on liabilities and duties which the corporators assume by accepting the terms therein specified, and the general rule is that the grant of the franchise on that account can no more be resumed by the legislature or its benefits diminished or impaired, without the assent of the corporators, than any other grant of property or legal estate, unless the right to do so is reserved in the Act of incorporation, or by some immemorial usage or general law of the State which was in operation at the time the charter was granted. (*College Cases*, 13 Wall. 213.)

Charters of private corporations duly accepted, it must be admitted, are executed contracts, but the different provisions, unless they are clear, unambiguous and free of doubt, are subjected to construction, and their true intent and meaning must be ascertained by the same rules of interpretation as other legislative grants.

Repeated decisions of this court have established the rule, that whenever privileges are granted to a corporation, and the grant comes under revision in the courts, such privileges are to be strictly construed against the corporation, and in favor of the public, and that nothing passes but what is granted in clear and explicit terms. (*Rice v. Railroad Co.*, 1 Black, 380. *Charles River Bridge v. Warren Bridge*, 11 Pet. 544.)

Whatever is not unequivocally granted in such Acts is taken to have been withheld, as all Acts of incorporation and Acts extending

the privileges of corporate bodies are to be taken most strongly against the corporations. (Sedgw. on Stat. and Const. Law, 339. *Lees v. Canal Co.*, 11 East. 652.)

Evidently the right of fishery, as well as the right to use the water of a stream for mill purposes, is the subject of private ownership, and when held by a good title, the one as much as the other is a vested right, and both alike are entitled to public protection, and are subject, in a certain sense, to legislative regulation and control. Difficulties, in every case, attend the proper adjustment of such rights, as the complete enjoyment of the one may interfere with the corresponding enjoyment of the other; but the presumption is, in construing any regulation upon the subject, that the framers of the regulation did not intend to allow either party to disregard the rule that he should so use his own property as not to injure the property of the owner of the other right.

Ownership of the banks and bed of the stream, as before remarked, gives to the proprietor the exclusive right of fishery, opposite his land, as well as the right to use the water to create power to operate mills; but neither the one nor the other right, nor both combined, confer any right to erect obstructions in the river to prevent the free passage of the fish up and down the river at their accustomed seasons, as such obstructions would impair and ultimately destroy all such rights owned by other proprietors both above and below the obstruction on the same stream.

Authoritative support to these views is found in the judicial decisions and legislative enactments of the State throughout her history, commencing even before the Revolution, and continued, in an unbroken series, to the present time. (*Com. v. Chapin*, 5 Pick. 204.)

Undoubtedly each proprietor of the land adjoining such a river or stream has in that State a several or exclusive right of fishery in the river immediately before his land, to the middle of the river, and may prevent all others from participating in it, and will have a right of action against any who shall usurp the exercise of it without his consent, but the Prov. St., 8 Ann., c. 3 (1709), 162, prohibited all persons, "without approbation or allowance," from placing in or across rivers or streams any weir, hedge, or other incumbrance to obstruct the free passage of fish in the proper seasons of the year. (1 Prov. Laws, 162.)

Persons who erect or build a dam across any river or stream where salmon, shad, alewives or other fish usually pass up into the natural ponds to cast their spawn, were required by the Prov. Stat. 15 Geo. II., c. 6 (1741), to make a sufficient passageway for the fish to pass up such river or stream, and the owners of dams, so constructed that such fish could not conveniently pass up the river or stream, were

required to make such a passageway and keep it open for a certain period in each year, as therein prescribed. (1 Id., 297. 1 Id., 17 Geo. II. (1743), 313. 1 Id., 19 Geo. II. (1745), 321.)

Laws of the kind, requiring the owners of dams across the rivers and streams of the State to build fishways, and keep them in repair, have been passed, in numerous instances, since the State Constitution was adopted, many of which are still in full force. Such laws usually require the owners of the dam to build the fishway at their own expense, and subject their doings in that behalf to the approval of some supervisory board or committee. (2 Laws Mass., App. 1020–1026.)

Reference was made at the argument to some thirty-five or forty statutes of the kind, passed at different periods, commencing the year the Constitution of the State was adopted (1780) and coming down to the present time, covering a period of more than ninety years. (*Vinton v. Welsh*, 9 Pick. 90. *Angel on Wat.* (6th ed.) 72. *Washburn on Easements* (2d ed.), 501. *Peables v. Hannaford*, 18 Me. 106. *Parker v. Mill Dam Co.*, 20 Me. 353.)

Statutes also encouraging mills by authorizing their owners or occupants to overflow the lands of other persons, by paying such damages as may be assessed in the mode prescribed, are also of very ancient origin, and have received the sanction of the courts of the State throughout the whole period of her history. (1 Prov. Stat., 12 Ann., c. 1 (1709), 160. 1 Id., 12 Ann., c. 8 (1714), 181. Ancient char., 388–404. 2 Laws Mass. 729. Rev. Stat. (1836), 676. *Angel on Wat.* (6th ed.) 664. *Washburn on Easements*, 332. *Murdock v. Stickney*, 8 Cush. 119.)

Public rights, in all jurisdictions, are subject to legislative control, and it is settled law in Massachusetts, and has been for a century and a half, including her colonial history, that the right of fishery in such rivers as the Connecticut and Merrimac, even above the point where they are navigable for boats or rafts, and the right to erect and maintain dams to create water-power for mill purposes, are public rights, and that the owners of such rights are bound by such reasonable regulations as the State may make and ordain for their protection and enjoyment.

All persons, say the supreme court of that State, in the case of *Stoughton v. Baker*, 4 Mass. 528, who may build a dam for mill purposes, on a stream annually frequented by fish, do it under an implied obligation to keep open sufficient sluices and fishways for the passage of fish at the proper seasons, and that the grant of the right to erect a dam, if made by the legislature, is to be construed to be under the same implied condition to keep open the fishways,

unless such implication is excluded by an express provision exempting the grantees from such an obligation.

By the statement of facts in that case it appears that the defendants' dam was an ancient dam; that they deraigned their title from the original proprietor, who acquired his right thereto in 1633 by a grant from the town within whose limits the mill-site was then situated; that the grant included the mill privilege and a weir adjoining the mill, and the exclusive right of fishery; that the grant was subsequently confirmed by the legislature, and that no fishery was ever made through the dam until the year 1789, when one was constructed at the expense of third parties, pursuant to a Resolution passed by the legislature of the State; that on the fifteenth of March, 1805, the legislature appointed a committee to examine the dams on that river and to order such alterations to be made in the fishways as in their opinion would be sufficient for the convenient passage of the fish at said dam. Three-fourths of the expenses were to be borne by the owners of the dams and one-fourth by the towns interested in the fisheries. Suitable fishways were accordingly constructed, and the towns having paid the whole expense instituted a suit to recover one-fourth of the expense of the owners of the dam. Able counsel appeared on both sides, and the opinion of the court was delivered by Chief Justice Parsons, all of the other justices concurring.

Based on these facts it was contended for the defendants that the original grant was a bar to the claim; but the court, conceding that the grant as confirmed amounted to a franchise of a several fishery, nevertheless held that the franchise could not be construed to include the right of excluding all fish from passing above the weir, the court giving as a reason for the conclusion that the value of a fishery in such a stream depends upon the shoals of fish that enter the river and pass to the ponds above to cast their spawn, adding that if none were allowed to pass, the public would lose their supply, and that the fishery would become of little or no value.

Evidence was introduced tending to show that the franchise of the exclusive fishery was lost by non-user; but the court held that the said franchise, if it was not lost, would be no objection to the right of the public to have a convenient passageway for the fish to ascend the river to the ponds. They also held that the original proprietor took a fee in the mill privilege, and that he had the right to erect the dam to raise water sufficient to operate his mill, but that the rights to build a dam for the use of a mill was subject to the following limitations: (1) That the proprietor must make compensation to the owners of the lands above the dam for damages occasioned by overflowing their lands. (2) That he must so con-

struct the dam that the fish will not be interrupted in their passage up the river to cast their spawn, adding that every owner of a water-mill or dam holds it on the condition that a sufficient and reasonable passageway shall be allowed for the fish. (*Burnham v. Webster*, 5 Mass. 266. *Nickerson v. Brackett*, 10 Id. 210. *Com. v. McCurdy*, 5 Id. 324. *Cottrill v. Myrick*, 12 Me. 229.)

Substantially the same questions were presented to the supreme court of the State in the case of *Vinton v. Welsh*, 9 Pick. 92, in which the opinion of the court was delivered by Chief Justice Parker, and the decision was in the same way and to the same effect. He decided that the owners of dams across such rivers, as well as the owners of such fisheries, hold their property subject to such regulations as the legislature from time to time shall prescribe for the preservation of the fish, basing his conclusion chiefly upon the fact that the colonial and provincial governments, as well as the government of the State under the state constitution, had exercised the right of prescribing such regulations from the first settlement of the country to the date of the decision in that case. (*Com. v. Chapin*, 5 Pick. 204.)

Litigations upon the subject ceased for a time, but the same questions thirty years later were again presented to the supreme court of the State in the case of *Com. v. Essex Company*, 13 Gray, 248, in which the opinion of the court was delivered by Chief Justice Shaw, as the organ of the whole court. Special reference is made in that opinion to the prior decisions of the court upon that subject, and all the leading cases here referred to are approved and the propositions decided are re-affirmed, the court announcing the following conclusions: That from the earliest times the right of the public to the passage of fish in rivers and the private rights of riparian proprietors, incident to and dependent on the public right, have been subject to the regulation of the legislature; that the mode adopted by the legislature, whether by public or private Acts, to secure and preserve such rights, has been by requiring in the erection of dams, such sluices and fishways as would enable these migratory fish, according to their known habits and instincts, to pass from the lower to the higher level of the water occasioned by such dam, so that, although their passage might be somewhat impeded, it would not be thereby essentially obstructed.

It appears in that case that the company was duly incorporated with power to construct a dam across the Merrimack River at Lawrence, subject to the condition, among other things, that they should construct suitable fishways in their dam for the passage of migratory fish; that they applied to the county commissioners, requesting them, after due notice, to prescribe the mode in which

they should construct such fishways in their dam; that such notice was given and a hearing had, and that the commissioners did prescribe the mode in which the company should comply with that requirement, and that the company did construct such fishways in their said dam according to the mode and plan so prescribed; that the fishways, however, as constructed, proved to be unsuitable and insufficient to provide a convenient passageway for the fish. (8 Special Laws, 470.)

Circumstances occurring subsequently made it necessary for the company to ask for leave to increase their capital stock, and the legislature, in granting their application, also provided that the company should be liable for all damages occasioned to the owners of fish-rights above the dam by the stopping or impeding the passage of the fish up and down the river by the said dam, and that such damages should be assessed by the county commissioners of the county in which such fish-rights existed, saving to the respective parties the right to apply for a jury to make such assessment in the manner provided for the recovery of damages from laying out highways. (8 Special Laws, 990.)

Having accepted the amendatory Act, the company availed themselves of that provision and caused the damages to the fish-rights existing above the dam to be assessed, and they paid the several assessments to the owners of the same, amounting to the sum of twenty-six thousand dollars, "as damages for hindering or impeding the passage of fish by their said dam, with the aforesaid fishways therein, as previously constructed."

Such fishways did not admit of the usual and unobstructed passage of the fish, as required by the law of the State and the seventh section of their Act of incorporation. Complaints subsequently arose, and the company was indicted for such neglect, and the case came to trial; and the jury, under the rulings and instructions of the court, found the defendants guilty, and they excepted to the rulings and instructions of the court, and the case was heard before the full court.

Unquestionably the case was fully considered, and the court in the first place re-affirmed all of their previous decisions upon the subject, which hold that persons who build a dam for mill purposes on a stream frequented by migratory fish, do it under an implied obligation to keep open sufficient sluices and fishways for the passage of the fish in their accustomed seasons, and that every grant to erect such a dam is to be construed as under the same implied condition, unless such implication is excluded by an express provision to that effect. Still the court held that the legislature had the power to regulate the public right, and in view of the fact that

the amended charter substituted a new proceeding for the recovery of damages by the owners of the fish-rights, and that the same, as assumed by the court, had been executed, the court also held that the amended charter had in it all the elements of a contract executed by one party and binding on the other, and that it was not competent for the legislature, even under the power reserved in a prior general law, to amend, alter or repeal any such charter to require the proprietors of the dam, *without any change of circumstances*, to construct the fishways, which by the terms of the amended charter they had been exempted from any obligation to construct, basing their opinion upon the ground that the right acquired under that provision had become vested by a legitimate exercise of the power granted. (Sess. Acts 1831, 613.)

Vested rights, it is conceded, cannot be destroyed or impaired under such a reserved power, but it is clear that the power may be exercised, and to almost any extent, to carry into effect the original purposes of the grant and to protect the rights of the public and of the corporators, or to promote the due administration of the affairs of the corporation. (*Miller v. the People of N. Y.*, 15 Wall. —.)

Had it appeared in that case that the amended charter contemplated the assessment of damages for fish-rights owned below the dam as well as those owned above the dam, the opinion would certainly be more satisfactory, as in that event the theory assumed by the court that all the parties damaged in their fisheries had been indemnified by the owners of the structure would be correct. (*Moulton v. Libbey*, 37 Me. 484.)

Fish-rights below a dam, constructed without passageways for the fish, are liable to be injured by such a structure as well as those owned above the dam, as the migratory fish, if they cannot ascend to the head-waters of the stream at their accustomed seasons will soon cease to frequent the stream at all, or in greatly diminished numbers.

Suppose the rule, however, to be correct, still it is quite clear that it does not control the case before the court for the reasons given by the same court in rendering the decree brought here for reëxamination by the present writ of error. Passageways for the fish had been constructed in that case under the Act passed incorporating the company, but they proved to be unsuitable and insufficient, and the court in sustaining the views of the defendants rested their decision upon the ground that the amended charter discharged them from the obligation to reconstruct such fishways, as the amended charter required them to make compensation for the injuries to the fish-rights in the place of the prior obligation arising from the rules of the common law of the State and the terms of their original charter, the

court holding that the government could not, *without any change of circumstances*, require the defendants to do the very acts which, by the terms of the amended charter, they had been exempted from doing ; but the court declined to decide whether, if the fishways provided should prove to be wholly unfit and inadequate to their purpose, the legislature could not by further legislation require the company to fulfil the original obligation.

Sufficient appears to warrant the conclusion that no evidence was introduced in that case to show that the fish-rights below the dam suffered any injury whatever, nor does it appear that the attention of the court was drawn to the fact that the river across which the dam was built runs through more than one State. (*Moore v. Veazie*, 32 Me. 353. *Veazie v. Moore*, 14 How. 571.)

Different rules perhaps may be applied in ascertaining the power of a state legislature to authorize permanent obstructions to the free passage of fish in a river flowing through two or more States, like the Connecticut or Merrimack, from the rules which should be applied in a case where the river across which the dam is constructed is wholly within the State which authorizes the structure ; but it is not necessary to consider that question in this case, as it was not raised in the state court, nor was it presented here by either party.

Fishways have never been constructed by the respondents in their dam, and they contend that they are not obliged to make any such provision for the passage of the fish, as their charter does not create any such obligation ; but the answer which the complainants make to that suggestion is decisive, that the charter does not contain any provision exempting them from that implied obligation, which arises in every such case by the common law of that State, unless the charter contains some provision which expressly negatives that implication.

Even suppose that it is so, still they contend that the fourth section of the charter of their grantors should be construed as negating any such implied condition ; but the court is entirely of a different opinion, as that section makes no provision for any compensation to the owners of the fish-rights below the dam, and the record shows that such fish-rights, as well as those above the dam, are injured by the obstruction to the free passage of the fish in their accustomed seasons to the head-waters of the river.

Authority to construct and maintain a dam without a fishway, it is conceded, is not granted in terms in the charter, and it may be added that the charter does not contain any words to warrant any such implication. On the contrary, the terms and provisions of the charter are consistent with the theory that the legislature contemplated the construction of a dam with a convenient passageway for

fish, so as not to impair unnecessarily the rights of the riparian owners either above or below the dam, and that the legislature, if the company failed to fulfil that obligation, may “compel them to do so by more specific legislation.”

Damages, it is true, were to be paid to “the owners of present fish-rights existing above the dam,” but the court here, in respect to that matter, concurs with the state court that the meaning of the sentence is satisfied by regarding it as providing for a partial interruption and injury of those rights, and not as contemplating their utter destruction; that the legislature which granted the charter may well have supposed that a dam across the river at that place, with the best fish-way that could be constructed, would, to some extent, obstruct the free passage of the fish, and may have intended by that provision to require the owners of the dam to make compensation for such injuries.

Viewed in any reasonable light it is quite clear that the charters of the respondents do not contain any stipulation or contract exempting them from the implied condition annexed to such a grant, not qualified by such a contract, that the corporation in erecting such a dam shall construct suitable and convenient fishways for the free passage of the fish to the head-waters of the river in their accustomed seasons; and that the charter, in view of the fact that it contains no such exemption, is subject to the power reserved to the legislature by the general law in operation when the charters were granted, that all Acts of incorporation shall at all times hereafter be liable to be amended, altered or repealed at the pleasure of the legislature. Such charters being subject to the implied condition to construct suitable fishways for the free passage of the fish, it follows that the corporations are not exempt from that burden, and that the legislature under the reserved power to amend, alter or repeal the charter, may pass laws to enforce that duty, as such a law does not impair any contract created by the charter or infringe any right vested in the corporation. (Rev. Stats. 366. College Cases, 13 Wall. 213.)

Charters subsequently granted must be understood as standing just as they would if that reservation of the power to amend, alter, or repeal the same had been incorporated into each charter. (Miller et al. v. The People of N. Y., 15 Wall. —.)

Power to legislate, founded upon such a reservation, is certainly not without limit, but it may safely be affirmed that it reserves to the legislature the authority to make any alteration or amendment in a charter granted, subject to it, that it will not defeat or substantially impair the object of the grant or any rights which have vested under it, which the legislature may deem necessary to secure either the

object of the grant or any other public right not expressly granted away by the charter. (Holyoke Water-Power Co., 104 Mass. 451.)

Such a charter may doubtless be granted to build a dam across a river whose whole course is within the State granting the franchise, with a provision exempting the corporation from all obligation to construct such fishway for the free passage of the fish, as the enterprise of erecting a dam to create power to operate mills is so far public in its nature that it is competent for the legislature to exercise the power of eminent domain to accomplish the purpose, if suitable provision is made to compensate the owners of the property or rights condemned under that power; but it may be more doubtful whether the legislature of a State can make a contract with such a corporation authorizing them to construct a dam across a river flowing through two or more States, which shall permanently exempt the grantees from all such obligation, and destroy forever the rights of fishery in the river throughout its whole course from its source to its confluence with tide-waters.

Concede, however, that the power to make such a contract exists, and that it is as boundless as the theory of the respondents assumes it to be, still the court here is of the opinion that the decree of the state court is correct, and that it should be affirmed, as the charters under which the dam in this case was erected and is maintained do not contain any such exemption from the implied obligation to construct fishways for the free passage of the fish, nor any provision which prohibits the legislature from imposing that obligation under the power reserved to amend, alter or repeal the charter.

Properly construed, neither of the charters affords any support whatever to the theory of the respondents, as they do not contain any semblance of a grant to take and subvert the fish-rights below the dam, nor is there anything in the provision requiring compensation to be made to the owners of the fish-rights above the dam, which is not perfectly consistent with the theory that it was incorporated into the charter merely to compensate the owners of such fish-rights for injuries which they would suffer from the obstruction, even if the customary fishways were constructed as required by immemorial usage and the express enactment of the legislature.

Decree affirmed.

D. W. MIDDLETON, *C. S. C., U. S.*

PLAN AND ELEVATION OF FISHWAY,

AT
SOUTH HADLEY FALLS, MASS.

A3 Mevel 140

CANAL

PLAN OF FISHWAY.

Top of Canal Bank

Top of over fill 99.17

Profile of Fishway

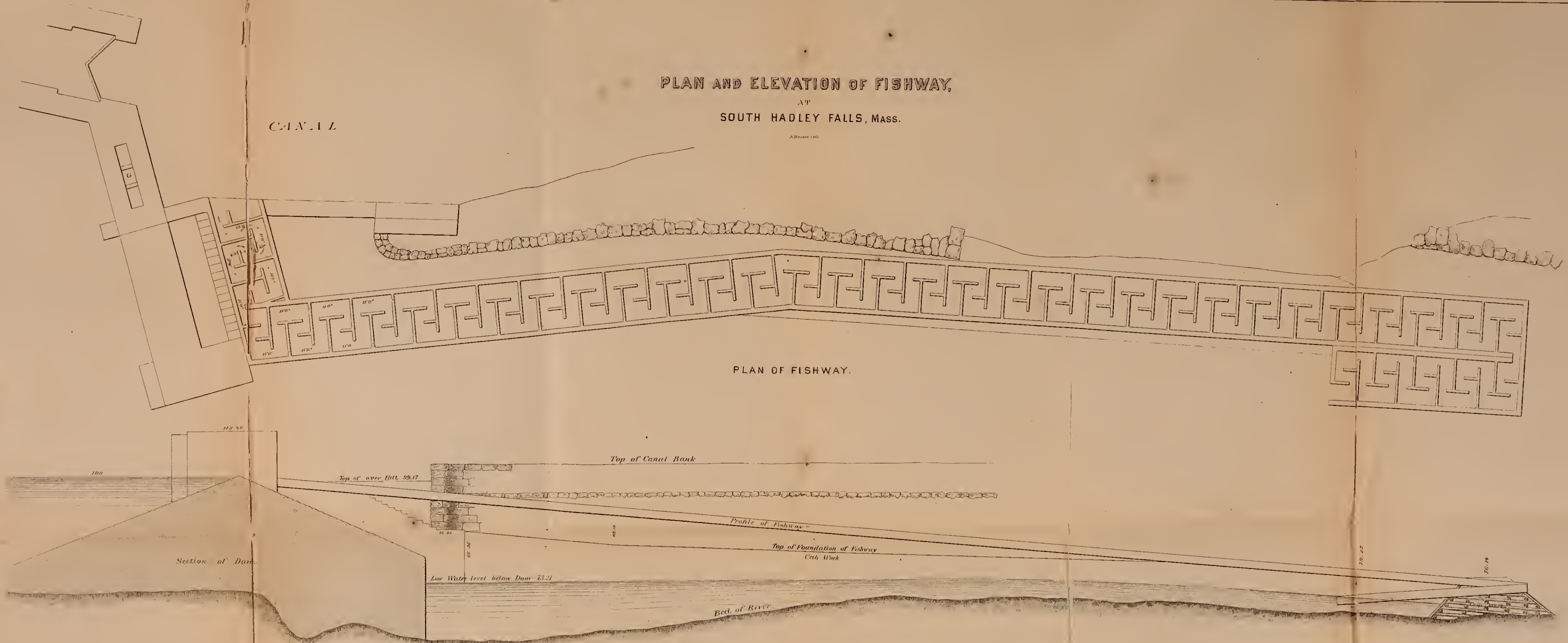
Top of Foundation of Fishway
Crib Work

Low Water level below Dam 73.21

Bed of River

Section of Dam

ELEVATION.



[G.]

HOLYOKE FISHWAY.

Height of dam,	30 ft.
Length of fishway,	440 ft.
Incline,	1 ft. in 15 ft.
Width (outside),	15 ft.
“ (inside),	13 ft.
Size of outside timbers,	12" × 12"
Bulkheads,	6" × 6"
Depth of fishway,	2 ft.
Openings in bays,	2 ft. × 2 ft.
Ice fenders (not shown in plan),	8" × 8"

This fishway carries a column of water two feet wide and two feet deep, which reaches the bottom with no perceptible increase in velocity, the current being less than two miles an hour.

m

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